

Enikepadu, Vijayawada 521108 Approved by AICTE, Affiliated to JNTUK, Kakinada (ISO 9001:2015 Certified Institution) Accredited with NAAC 'A' grade

### Financial Support Request Letter

1.	Name of the Staff Member	: Dr.Mr.Ms. T. Venkata M Narebrai
2.	Designation	Asst Paglesson
3.	Department	Electrica and Electronics Engineering
4.	Conference / Publication / M Industrial Visit / Tours With	Membership Fee / Workshop / FDP / Seminar / Training / details:
	Microsoft Certified	Azure Data Engineur Associate
5.	Date & Duration of the Prog	ram: 31/03/2023
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PRINCIPAL SRK INSTITUTE OF TECHNOLOGY ENIKEPADU, VIJAYAWADA-521 108. No.

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PRINCIPAL SRK INSTITUTE OF TECHNOLOGY ENIKEPADU, VIJAYAWADA-521 108. C





# Thati Venkata M Lakshmi

(Legal name: THATI VENKATA M LAKSHMI)
has successfully achieved the certification

# Microsoft Certified: Azure Data Engineer Associate

Date of achievement: March 31, 2023 Valid until: April 1, 2024

Certification Number: 1684-7251

PRINCIPAL SRK INSTITUTE OF TECHNOLOGY ENIKEPADU, VIJAYAWADA-521 108. Huseleer

Satya Narayana Nadella

Joseph W.



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# Financial Support Request Letter

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Engineer Associate)

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# S Nageswara Rao

(Legal name: Nageswara Rao Sikha)

has successfully achieved the certification

## Microsoft Certified: Azure Data Engineer Associate

Date of achievement: March 31, 2023

Valid until: April 1, 2024

Certification Number: 1684-6398

Satya Narayana Nadella

Jose W.

PRINCIPAL SRK INSTITUTE OF TECHNOLOGY ENIKEPADU, VIJAYAWADA-521 108.

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# Financial Support Request Letter

1. Name of the Staff Member	: Dr.Mr.Ms. T. Venkata M datibrai
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3. Department	Electrical and Electronics Engineering
Conference / Publication /     Industrial Visit / Tours Wi	Membership Fee / Workshop / FDP / Seminar / Training /
Microsoft Certifie	A Azure Administrator Associate
5. Date & Duration of the Pro	ogram: 29/03/2023
6. Associating Professional I	Body / Agency:
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### Thati Venkata M Lakshmi

(Legal name: THATI VENKATA M LAKSHMI)

has successfully achieved the certification

Microsoft Certified: Azure Administrator Associate

Date of achievement: March 29, 2023

Valid until: March 30, 2024

Certification Number: 1678-8486

PRINCIPAL SRK INSTITUTE OF TECHNOLOGY ENIKEPADU, VIJAYAWADA-521 108.

Satya Narayana Nadella



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# S Nageswara Rao

(Legal name: Nageswara Rao Sikha)

has successfully achieved the certification

#### Microsoft Certified: Azure Developer Associate

Date of achievement: March 28, 2023

Valid until: March 29, 2024

Certification Number: 1676-4327

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PRINCIPAL SRK INSTITUTE OF TECHNOLOGY ENIKEPADU, VIJAYAWADA-521 108. Mullel





### Thati Venkata M Lakshmi

(Legal name: THATI VENKATA M LAKSHMI) has successfully achieved the certification

### Microsoft Certified: Azure Developer Associate

Date of achievement, March 28, 2023 Valid until: March 29, 2024

Certification Number: 1676-5449

PRINCIPAL SRK INSTITUTE OF TECHNOLOGY ENIKEPADU, VIJAYAWADA-521 108.

Satya Narayana Nadella

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# Financial Support Request Letter

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1.	Name of the Staff Member	: Dr/Mr/Ms Ch: huani
	Designation	: Assistant Professor
3.	Department	: Computer Science & Engineering
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# Certificate of Completion

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successfully completed Five days faculty development Program on "Ethical Hacking" Organized by the Blackbucks and KKR & KSR Institute of Technology from 27th February to 3rd March 2023

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KKR & KSR INSTITUTE OF TECHNOLOGY AND SCIENCES, GUNTUR

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#### Financial Support Request Letter

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ENIKEPADU, VIJAYAWADA - 521 108. Ph.: 2843839

Name of Ave. Dec. A. Radhika

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PRINCIPAL SRK INSTITUTE OF TECHNOLOGY ENIKEPADU, VIJAYAWADA-521 108.

Tallellee,

# CLASS WISED FACIAL ATTENDANCE SYSTEM

#### I. DR. A.RADHIKA.

ASSOCIATE PROFESSOR, DEPARTMENT OF CSE, SRK INSTITUTE OF TECHNOLOGY VIJAYAWADA, A.P., INDIA.

#### G. CHANDRIKARANI, Y. MOHAN BALAJ, LAKHIL, D. TULASI PRIYA

Students, Dept of Computer Science and Engineering, S.R.K Institute of Technology, Vijayawada, INDIA

Abstract -One of the foremost reminiscences everyone has about college is the morning roll call that the lecturers would in person call upon our names, and we tend to reply in affirmation to prove our attendance. It is a long and tedious routine in educational institutions. Attendance being a very important side of administration might usually become a time constraint, repetitive job, loaning itself to inaccuracies. Managing student's attendance at lecture periods has become a torigh challenge. The ability to work out the attendance proportion becomes a significant task as manual computation produces errors, and wastes a great deal of our time.

The basis of developing an automatic attendance management system is to computerize the standard method of taking attendance. The proposed system strives to outgrow the constraints of the existing systems and provides features such as detection of faces, extraction of features, detection of extracted features and analysis of student's attendance.

Keywords: Student dataset, Face recognition, Detection

#### I. INTRODUCTION

The attendance management system has become an important factor in the education field. This system should help the professors and lecturers in marking the attendance by reducing their effort and the time consumption. The study findings enable the definition of the project problem statement, its objectives, scope, and advantages of the Face Recognition Attendance Management System.

At present attendance marking involves manual attendance on thesis sheet by professors and teachers but it is very timeconsuming process and chances of proxy is also one problem that arises in such type of attendance marking. Also, there are attendance marking system such as RFID (Radio Frequency Identification), Biometrics etc. but these systems are currently not so much popular in schools and classrooms for students. So, why not shift to an automated attendance system which works on face recognition technique? Be it a class room or entry gates it will mark the attendance of the students, professors, employees, etc.

The main purpose of this project was the slow and inefficient traditional manual attendance system. These made us to think why not make it automated fast and much efficient. Also, such face detection techniques are in use by department like crime investigation where they use CCTV footages and detect the faces from the crime scene and compare those with criminal database to recognize them.

#### IL LITERATURE SURVEY

Research involves analysing the solutions proposed by others and find out the shortcomings of the proposed systems to put forward a better solution to the problem. To overcome the problems in marking the attendance, the approach used was based on face recognition where the main task is to match the recently taken images with those available in the database.

Dipti Kumbhar, presented the solution to this in [1], where databases are available, dataset of students which involves their name, roll number, department, and images of student in different poses and variations pictures and the other is a database for attendance. Using real time computer vision algorithms in automatic attendance management systems This paper introduces a new approach in automatic attendance management systems, extended with computer vision algorithms. The Proposed system uses real time face detection algorithms which automatically detects and registers students attending on a lecture. [2] was proposed by CH. Vinod Kumar , DR. K. Raja Kumar. Iintroduced a system for student attendance in Classes and any Lecture hall, proposed system we will detect and recognize the faces by using Eigen object detector algorithm. This can be done with the help of OpenCV with haarcascades which are present in the OpenCV inbuilt. The images which are taken from the camera are detected with haarcascade frontal faces and eyes then trained with Eigen algorithm, the trained faces are stored in a database first and compared to the trained images (the trained images are initially present in the database means the related persons to the particular college or organization) after comparing it will make attendance to the recognized persons.[3],was Face Recognition based Attendance Management System using Machine Learning Anushka Waingankar, the attendance is recorded by using a camera that will stream video of students, detect the faces in the image and compare the detected faces with the student database and mark the attendance. The attendance gets marked in a spreadsheet. 1. Finds face in an image. 2. Analyses facial features. 3. Compares against known faces and makes a prediction. [4], Was S. Dev and T. Patnaik, Attendance system using face recognition is a procedure of recognizing students by using face biostatistics based on the high-definition monitoring and other computer technologies. The development of this system is aimed to accomplish digitization of the traditional system of toxics amendance by calling names and maintaining penpaper records. Present strategies for taking attendance are to the process of the pro SRK INSTITUTE OF TECHNOLOGY Attendance records can be easily

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## Financial Support Request Letter

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3. Department	:Cse	0
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# CYBER ATTACK DETECTION IN NETWORK USING MACHINE. LEARNING ALGORITHMS

Dr.D.ANUSHA, Associate Professor, Department of CSE, SRK Institute of Technology, Vijayawada, A.P., India.

### UNDRAJAVARAPU.SATHVIKA, RAVURI.SRUJAN SAI, RAMISETTY.TEJA SMITHA, GUDIMETLA.PAVAN

Department of CSE, SRK Institute of Technology, Vijayawada, A.P., India.

ABSTRACT: The use of new innovations give incredible advantages to people, organizations, and governments, be that as it may, messes some up against them. For instance, the protection of significant data, security of put away information stages, accessibility of information and so forth. Contingent upon these issues, digital fear based oppression is one of the most significant issues in this day and age. Digital fear, which made a great deal of issues people and establishments, has arrived at a level that could undermine open and nation security by different gatherings, for example, criminal association, proficient people and digital activists. Along these lines, Intrusion Detection Systems (IDS) has been created to maintain a strategic distance from digital assaults.Right now, learning the bolster support vector machine (SVM) calculations were utilized to recognize port sweep endeavors dependent on the new CICIDS2017 dataset with 97.80%, 69.79% precision rates were accomplished individually.

#### INTRODUCTION

However, our experience from following up on unsolicited remote portscans we detect in practice is that almost all of them turn out to have come from compromised hosts and thus are very likely to be hostile. So we think it reasonable to consider a portscan as at least potentially hostile, and to report it to the administrators of the remote network from whence it came However, this paper is focussed on the technical questions of how to detect portscans, which are independent of what significance one imbues them with, or how one chooses to respond to them. Also, we are focussed here on the problem of detecting a portscan via a network intrusion detection system (NIDS). We try to take into account some of the more obvious ways an attacker could use to avoid detection, but to remain with an approach that is practical to employ on busy networks. In the remainder of this section, we first define portscanning, give a variety of examples at some length, and discuss ways attackers can try to be stealthy. SRK INSTITUTE OF TECHNOLOGY prior work on portscan detection. Then we In the next section, we discuss a variety of ENIKEPADU, VIJAYAWADA 521 108.

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# Financial Support Request Letter

1.	Name of the Staff Member	: Dr./Mr./Ms Dr. G. D. K. Kishole
2.	Designation	Associate Professor
3.	Department	:
4.	Conference / Publication / M Industrial Visit / Tours With	details:
5.	Applications of co	mputer Vision using deep Learning am: 20-25 February 2003
0.	Associating Professional Bo	dy / Agency: SGEC
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Date: 18/2/20

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ENIKEPADU, VIJAYAWADA - 521 108. Ph.: 2843839

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Learning
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PRINCIPAL SRK INSTITUTE OF TECHNOLOGY ENIKEPADU, VIJAYAWADA-521 108.

# SESHADRIRAO GUDLAVALLERU ENGINEERING COLLEGE



(An Autonomous Institute with Permanent Affiliation to JNTU, Kakinada)
SeshadriRao Knowledge Village::Gudlavalleru, Krishna District, AP:521356

#### CERTIFICATE OF PARTICIPATION

This is to certify that

Dr. Damodara krishna kishore Galla, Associate Professor

from

SRK Institute of Technology

has participated in One Week Faculty Development Program on "Applications of Computer Vision using Deep Learning" conducted by the department of Electronics and Communication Engineering, SeshadriRao Gudlavalleru Engineering College during 20 - 25 February 2023.

Crove Costn

Dr. K. Naga Prakash Coordinator ,Professor IKIL

Dr. Y. Ramakrishna Professor and HoD Dr. G. V. S. N. R. V. Prasad Principal

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# Financial Support Request Letter

1.	Name of the Staff Member	: Dr/Mr/Ms. GI-Sti Lakshmi	
2.	Designation	: Assistant Professor	
3.	Department	:	
4.	Conference / Publication / M Industrial Visit / Tours With	embership Fee / Workshop / FDP / Seminar / Training / details:	
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5.	Date & Duration of the Prog	ram: 2nd-11th Tanuary 2023	
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2.	Recommendations of the HO Recommendations of the Prin	cipal: rd 1001	iber
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NATIONAL INSTITUTE OF TECHNOLOGY WARANGAL, (T.S.), INDIA



and

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She / He has successfully completed all the requirements for the completion of the programme.

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N.V.Maha Lakshmi Coordinator PSCMR Vijayawada A P

Dr. J.Lakshar Harayanal

Prof. R.B.V. Subramaanyam

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Mr. P. Jashuva

Dr. K. Murali

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Principal



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Industrial Engineering Journal

ISSN: 0970-2555

Volume: 52, Issue 1, No. 1, January 2023

#### SCHEMES TO DETECT DATA POISON UNDER DISTRIBUTED ENVIRONMENT

Dr. BANDI ASHA LATHA Professor, Department of CSE, SRK Institute of Technology, Vijayawada, A.P., India.

GAMPA RADHA KRISHNA, CHENNAMSETTY HEMANTH SAI, HUPATHI RAMYA RAJU, REPALLE BHARATH CHAITANYA Student, Department of CSE, SRK Institute of Technology, Vijayawada, A.P., India.

ABSTRACT: IN THIS PAPER we proposed cross-learning mechanism would generate training loops, based on which a mathematical model is established to find the optimal number of training loops. Then, for semi-DML, we present an improved data poison detection scheme to provide better learning protection with the aid of the central resource. To efficiently utilize the system resources, an optimal resource allocation approach is developed. Simulation results show that the proposed scheme can significantly improve the accuracy of the final model by up to 20% for support vector machine and 60% for logistic regression in the basic-DML scenario. Moreover, in the semi-DML scenario, the improved data poison detection scheme with optimal resource allocation can decrease the wasted resources for 20-100%.

#### INTRODUCTION

Distributed machine learning (DML) has been widely used in distributed systems, where no single node can get the intelligent decision from a massive dataset within an acceptable time. In a typical DML system, a central server has a tremendous amount of data at its disposal. It divides the dataset into different parts and disseminates them to distributed workers who perform the training tasks and return their results to the center. Finally, the center integrates these results and outputs the eventual model.Unfortunately, with the number of distributed workers increasing, it is hard to guarantee the security of each worker. This lack of security will increase the danger that attackers poison the dataset and manipulate the training result. Poisoning attack is a typical way to tamper the training data in machine learning. Especially in scenarios that newly generated datasets should be periodically sent to the distributed workers for updating the decision model, the attacker will have more chances to poison the datasets, leading to a more severe threat in DML.

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Dr. K. Satyanarayana Convener & HoD-ME

Dr. Y. Mallikarjuna Reddy Principal



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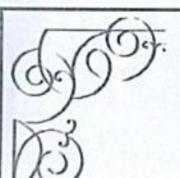
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#### A New Multimedia Web-Data Mining Approach based on Equivalence Class Evaluation Pipelined to Feature Maps onto Planar Projection

M. Ravi<sup>1,3</sup>, M. Ekambaram Naidu<sup>2</sup> and G. Narsimha<sup>3</sup>

<sup>1</sup>CMR Institute of Technology, Hyderabad-501401, Telangana, India

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E-mail: ravimogili@gmail.com, menaidu2005@yahoo.co.in, narsimha06@gmail.com

Keywords: supervised learning, information retrieval, multimedia web-databases, statistical metrics, feature extraction

Received: Dec 25, 2022

Multimedia information are semi-organized or unstructured information elements whose essential substance is separately or by and large utilized for correspondence. Sight and sound information mining recognizes, arranges, and recovers important highlights from an assortment of media to recognize enlightening examples furthermore, connections for information acquisition. Computer Vision (CV)-based systems have been increasingly popular in recent years, owing to the growing number and complexity of datasets. In CV, finding meaningful photos in a huge dataset is a difficult task to solve. Traditional search engines retrieve photos based on text such as captions and metadata, but this strategy can result in a lot of irrelevant output, not to speak the time, effort, and money required to tag this textual data.

In this paper, we proposed a pipelined deep learning oriented methodology framework for multimedia webdata mining based on content extracted feature maps in planner projection as input. Color, texture, form, and other high-level properties of images are represented as numerical feature vectors. This technique is based on the following computer vision tasks in general i.e., Image segmentation, Image classification, Object detection etc. In order to prove the computational efficiency and to validate its statistical behaviour, we have also presented the experimental evaluation on an standard multimedia dataset. The obtained performance results are then compared with some significant existing approaches in the terms of various statistical measures/parameters.

Povzetek: Predstavljena je metoda rudarja multimedijev z globokim učenjem, ki temelji na lastnostih vzebine slik. Uporablja se za različne naloge računalniIkega vida, kot so segmentacija, klasifikacija in zaznavanje objektov. Preizkušena je bila na standardnem multimedialnem naboru podatkov.

#### 1 Introduction

Multimedia information mining involves identifying, categorizing, and retrieving relevant features from a variety of media to identify educational patterns and relationships for data acquisition. The performance of multimedia information mining is directly impacted by the level of information contained in the data, which can be recognized during the data pre-processing stage. Data pre-processing aims to reduce data sionality by preserving useful features, which are factors (or attributes) used as input for selection algorithms. This greatly improves runtime (training time), predictive accuracy, and result readability when working with human interpretation and knowledge. There are two key steps in data pre-processing: feature extraction (FE) and feature selection (FS). FS techniques are a subset of the broader field of FE. While FE extracts multiple features from the original data to generate a dataset, FS selects a subset of original variables to build the model. However, identifying related features provides insights into underlying phenomena. On the other hand, eliminating irrelevant variables enhances the accuracy of data classification. Multimedia web-information mining includes various applications such as face recognition, pattern recognition, text detection and recognition in images and video frames, biomedicine, emotion recognition, image retrieval and classification, and image annotation, among others.

#### 1.1 Multimedia

Multimedia information are semi-organized or unstructured information elements whose essential substance is exclusively or all in all utilized for correspondence. The term sight and sound covers a variety of media article like a mix of text, picture, video, sound, numeric, sound, liveliness, graphical, and straight out information on a PC show terminal. In the approach of programming innovation, sight and sound is characterized as "a PC program comprised of messages, realistic, sound and pictures and animations". Text is made out of an enormous number of disorganised and nebulous characters of normal language text [22, 23]. Writings can be inserted in pycordings in two structures,



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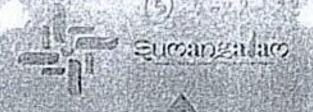
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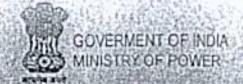
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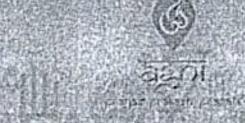
Receiver Signature

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अमल महोत्सव







## Certificate of Participation

This is to certify that

Thati Venkata M Zakshmi Mr./ Ms./Dr./Prof.

has participated in the NATIONAL CONFERENCE organized by Vijnana Bharati, Power Foundation of India and SPA Vijayawada held on 19th December 2022 on the theme of 'Agni - Energy Security for Atmanirbar Bharat' at School of Planning and Architecture, Vijayawada.

Prof/Dr. Kallasa Rao Coardinator

President, BVM

Director, SPA, Vijayawada



Enikepadu, Vijayawada 521108

Approved by AICTE, Affiliated to JNTUK, Kakinada

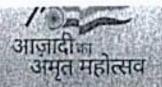
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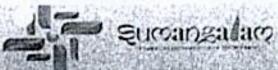
Accredited with NAAC 'A' grade

#### Financial Support Request Letter

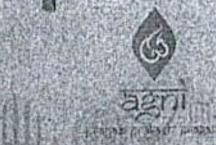
1. Name of the Staff Mem		
2. Designation	: Associate Prop	esot
3. Department	: Computer Scien	ce & Engineering
Conference / Publication     Industrial Visit / Tours	n / Membership Fee / Workshop / With details:	FDP / Seminar / Training /
	ergy Security for	Atmonisher Bhasi
5. Date & Duration of the	Program: 19 10 2022	
6. Associating Professions	al Body / Agency: Agri	
7. Financial support particular	ulars:	
Registration Cha     Travelling Allow		
<ol> <li>Membership Fee</li> <li>Others (if any)</li> </ol>		
Date: 15 12 2022		Signature of the Staff Memb
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Towards Agni - (  G. Herren Sudha Pari  Prepared by	bharat Rihui Approved by	Audited by Receiver Signature









## Certificate of Participation

This is to certify that

Mr./ Ms./Dr./Prof. Br. B. Anisha.

has participated in the NATIONAL CONFERENCE organized by Vijnana Bharati,
Power Foundation of India and SPA Vijayawada held on 19th December 2022
on the theme of 'Agni - Energy Security for Atmanirbar Bharat' at
School of Planning and Architecture, Vijayawada.

Prof. Dr. Kailasa Rao Coordinator Prof. P. S. Avadhan

K INSTITUTE OF TECHNOLOGY BHARATIY





Prof. Dr. Ramesh Srikonda Director, SPA, Vijayawada



Enikepadu, Vijayawada 521108 Approved by AICTE, Affiliated to JNTUK, Kakinada (ISO 9001:2015 Certified Institution) Accredited with NAAC 'A' grade

#### Financial Support Request Letter

1.	Nam	ne of the Staff Member	: Dr.Mr.Ms. K. Satyarazayana
2.	Desi	gnation	: Asst. Professor.
3.	Dep	artment	Electrical and Electronics Engineering
4.	Cont	ference / Publication / M strial Visit / Tours With	details: FDP (A Two week FDP 00
			power electronics in electric vehicles"
5.	Date	& Duration of the Prog	ram: 12/12/2022 - 19/12/2022 .
		ociating Professional Bo	
7.	Finar	ncial support particulars	
	i. ii. iii. iv.	Registration Charges Travelling Allowance Membership Fee Others (if any)	
Da	ite: 31	6/12/2022	K. Satyananyana Signature of the Staff Member
2.	Reco	mmendations of the HO mmendations of the Prin mmendations of the IQA	D: Company of the

Account Department
Accountant:
Date: 24

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Date 2 G 12 2012 No. VOUCHER F TECHNOLOGY ENIKEPADU, VIJAYAWADA - 521 108. Ph.: 2843839 Name of Ne. Pald to K. SATYAN-ARAYANA Cash Cheque CASH the Sum of Rupers Theo thousand tupers only Towards FOP (A. Two week FDP on "Applications of power Electronics in Electric Vehicles") Approved by Audited by Doony.

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Receiver Signature

No: ATAL/2022/1668654603







### ALL INDIA COUNCIL FOR TECHNICAL EDUCATION

Nelson Mandela Marg, Vasant Kunj, New Delhi – 110 070

### AICTE Training and Learning (ATAL) Academy

## Certificate

This is certified that SATYANARAYANA KANULLA, Assistant Professor of SRK INSTITUTE OF TECHNOLOGY participated & completed successfully AICTE Training And Learning (ATAL) Academy Blended/Hybrid FDP on "Applications of Power Electronics in Electric Vehicles" from 2022-12-12-2022-12-17 to 2022-12-19-2022-12-23 at NRI INSTITUTE OF TECHNOLOGY.

Harling.

Advisor-I, ATAL Academy Mamta Rani Agarwal



Melelelle Goordinator

The leedy

SRK INSTITUTE OF TECHNOLOGY



# SRK INSTITUTE OF TECHNOLOGY Enikepadu, Vijayawada 521108 Approved by AICTE, Affiliated to JNTUK, Kakinada (ISO 9001:2015 Certified Institution) Accredited with NAAC 'A' grade

#### Financial Support Request Letter

1.	Nan	ne of the Staff Member	: Dr.Mr.Ms. B. dehalatha
2.	Des	ignation	: Associate Professor
3.	Dep	artment	: Computer Science & Engineering
4.	Con	ference / Publication / I strial Visit / Tours Wit	details:
		applications o	AT & ML & Dota Science
5.	Date	& Duration of the Pro	ram: 12/12/22 to 17/12/2022
6.		ociating Professional B	
7.	Fina	ncial support particular	= 1
	i.	Registration Charge	500 -
	ii.	Travelling Allowan	
	iii.	Membership Fee	
	iv.	Others (if any)	
Di	ite:	7/12/2022	B. Signature of the Staff Member
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Account Department
Accountant: 3. Date: 7 12 2022

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PRINCIPAL
SRK INSTITUTE OF TECHNOLOGY
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₹ 500/-		B. Amaria

PRINCIPAL SRK INSTITUTE OF TECHNOLOGY ENIKEPADU, VIJAYAWADA-521 108.

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#### KKR & KSR INSTITUTE OF TECHNOLOGY AND SCIENCES

DEPARTMENT OF ARTIFICIAL INTELLIGENCE

# CERTIFICATE

OF PARTICIPATION

THIS CERTIFICATE IS PRESENTED TO

## Mrs. Ashalatha

of SRK INSTITUTE OF TECHNOLOGYhas successfully completed a One week National Level
Online S T T P on

"APPLICATIONS OF AI, ML AND DATA SCIENCE" held from 12th-17th December, 2022.

8. wasedraw

Dr. S. Nagendram

Co-Ordinator

8

Dr. G. Murali

Program Chair, HOD-AI

000

Dr.P.Babu

Principal

PHINCIPAL



Enikepadu, Vijayawada 521108
Approved by AICTE, Affiliated to JNTUK, Kakinada (ISO 9001:2015 Certified Institution)
Accredited with NAAC 'A' grade

#### Financial Support Request Letter

1.	Name of the Staff Member	: Dr. Mr. Ms. M. Suxesh Babu
2.	Designation	Asst- professon
3.	Department	: TT
4.	Conference / Publication / N Industrial Visit / Tours With	details:
	TT SOFT WAR	SOLUTIONS FOR BUSINESS
5.	Date & Duration of the Prog	ram: 29-11-2022 to 09-12-2022
6.	Associating Professional Be	
7.	Financial support particulars	
	Registration Charges     Travelling Allowanc     Membership Fee     Others (if any)	
Da	ate: 14/12/2 2	Signature of the Staff Member
2.	Recommendations of the HO Recommendations of the Pr Recommendations of the IQ	DE: TOROS

Account Department
Accountant:

Date: 14/12/2 L

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No.	VOUCHE	R	Date 14 12 2025
SRK IN	STITUTE OF ENIKEPADU, VIJAYAWADA - 52	TECH 1 108. Ph. : 284	NOLOGY
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₹ 500/-			Receiver Signature

PRINCIPAL SRK INSTITUTE OF TECHNOLOGY ENIMEPADU, VIJAYAWADA-521 103.

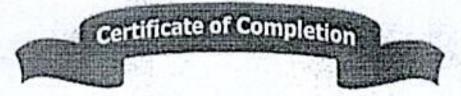
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## Andhra Pradesh State Skill Development Corporation (APSSDC)

(Department of Skills Development & Training, Govt. of Andhra Pradesh)



This is to certify that

Mr./Ms./Di	·	M. SURESH	BABU	
has activel	y participated	and success	fully completed AI	PSSDC
FDP on	IT SOFTWARE	SOLUTIONS I	OR BUSINESS (ITSSB	)
from	29-11-2022	to	09-12-2022	
in Virtual.				1



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SANKALP Ministry of Skill Development





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& Entrepreneurship

Dr. D.V. Rama Koti Reddy

Executive Director, APSSDC SRK INSTITUTE OF TECHNOLOGY

Sri S. Satyanarayana, IAS

Managing Director APSSDC



Enikepadu, Vijayawada 521108
Approved by AICTE, Affiliated to JNTUK, Kakinada
(ISO 9001:2015 Certified Institution)
Accredited with NAAC 'A' grade

#### Financial Support Request Letter

1.	Name of the Staff Member	: Dr.Mr.Ms. J. Prasanna
2.	Designation	: Assistant Professor
3.	Department	: Science and Humanities
4.	Conference / Publication / Management / Manage	Membership Fee / Workshop / FDP / Seminar / Training /
	" Effective Per	lagogy for Science" Org. by JMI Colleg
5.	Date & Duration of the Pro	gram: 29.11.22 to 3.12.22 & 5 days
6.		ody/Agency: JMJ college for Women, Tienali
7.	Financial support particular	
	i. Registration Charge	And the late of th
	ii. Travelling Allowan	ces.
	ii. Travelling Allowandiii. Membership Fee iv. Others (if any)	
D	iii. Membership Fee	Signature of the Staff Member
1.	iii. Membership Fee iv. Others (if any)	Signature of the Staff Member

Account Department Accountant: السّلا Date: عراراء "Twellef

No.

#### VOUCHER

Date 24-11-2022

## SRK INSTITUTE OF TECHNOLOGY

ENIKEPADU, VIJAYAWADA - 521 108. Ph.: 2843839

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# JMJ COLLEGE FOR WOMEN ((AUTONOMOUS), TENALI



Affiliated to Acharya Nagarjuna University

Morrispet (P.O), TENALI-522202, Guntur Et., Andrea Pradesh.

College Email: jmjtenali@gmail.com Website: jmjcollege.ac.in Phone: 08644-227994

#### CERTIFICATE

This is to certify that Tadepalli Prasanna

of SRK Institute of Technology, Enikepadu, Vijayawada

has Participated in Five Day National Level Online FDP on Effective Pedagogy for Science

from 29.11.2022 to 03.12.2022 jointly organized by Departments of Physics and Mathematics, JMJ College

for Women (Autonomous), Tenali.

PRINCIPAL HOLOGY

Convener Dr. S. Uma Maheswari HoD, Mathematics C. M. Anita

Organizing Secretary Ms. C.M. Anitha HoD, Physics S. 8-3

Principal Dr. Sr. Shiny KP



# Enikepadu, Vijayawada 521108 Approved by AICTE, Affiliated to JNTUK, Kakinada (ISO 9001:2015 Certified Institution) Accredited with NAAC 'A' grade

#### Financial Support Request Letter

1. N	Name of the Staff Member	: Dr.Mr.Ms. V. Prasanthi	
2. I	Designation	: Assistant Professor	
3. I	Department	: Science and Humanities	
4. (	Conference / Publication / M Industrial Visit / Tours With	Membership Fee / Workshop / FDP / Seminar /	Training/
E	OP on Effective	Pedagogy For Science	
< 1	Data & Duration of the Proc	ogram: 29-11-22 to 3-12-22 & Fiv	re days
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6.	Associating Professional B	Body/Agency: JMJ College for W	omen , Teral
6.	Associating Professional B	Body/Agency: JMJ College for W	omen Terd
6. 7.	Associating Professional B Financial support particular i. Registration Charge	Body/Agency: JMJ College for Wors: es: 1500/-	omen Terd
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6. 7.	Associating Professional B Financial support particular i. Registration Charge ii. Travelling Allowan iii. Membership Fee	Body/Agency: JMJ College for Wors: es: 15001- nces: V. Prosanth	he Staff Member
6. 7. Da	Associating Professional B Financial support particular  i. Registration Charge  ii. Travelling Allowane  iii. Membership Fee  iv. Others (if any)	Body/Agency: JMJ College for Wors:  es: 1500/- nces:  V. Prosonthe Signature of the	omen, lend

Account Department Accountant: المنطقة Date: عمال الماكة

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Towards F.D.P.		
Prepare 15001 —	Approved by	V. Pragarthi

PRINCIPAL SRK INSTITUTE OF TECHNOLOGY ENIKEPADU, VIJAYAWADA-521 108.

Callelley

# JMJ COLLEGE FOR WOMEN ((AUTONOMOUS), TENALI

Affiliated to Acharya Nagarjuna University

Morrispet (P.O), TENALI-522202, Guntur Dt., Andhra Pradesh.

College Email: jmjtenali@gmail.com Website: jmjcollege.ac.in Phone: 08644-227994

# CHRANIFICATE

This is to certify that Prasanthi Vellanki

of SRK Institute of Technology, Enikepadu

has Participated in Five Day National Level Online FDP on Effective Pedagogy for Science

from 29.11.2022 to 03.12.2022 jointly organized by Departments of Physics and Mathematics, JMJ College

for Women (Autonomous), Tenali.

PRINCIPAL TITUTE OF TECHNOLOGY

Convener

Dr. S. Uma Maheswari HoD. Mathematics C. M. Anithe

Organizing Secretary
Ms. C.M. Anitha

HoD, Physics

Principal

Dr. Sr. Shiny KP



Enikepadu, Vijayawada 521108 Approved by AICTE, Affiliated to JNTUK, Kakinada (ISO 9001:2015 Certified Institution)

Accredited with NAAC 'A' grade

#### Financial Support Request Letter

Name of the Staff Member	: Dr./Mr./Ms. G. Kot	есыататта
2. Designation	: Assistant Prot	essor
3. Department	: Science and H	umanities
Conference / Publication / M     Industrial Visit / Tours With		/ FDP / Seminar / Training /
and the same and t	The state of the s	Ong by JMJ college ,T
5. Date & Duration of the Prog	gram: 29-11-22 to 5-12	-22 & 5 days
6. Associating Professional B	ody/Agency: TMT coll	ege for Women Tenali
7. Financial support particular		
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Date: 24 -05 - 202		G. Koliswaramne Signature of the Staff Member
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Account Department Accountant: Date: 24

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SRK INSTITUTE OF TECHNOLOGY

ENIKEPADU, VIJAYAWADA · 521 108. Ph.: 2843839

Name of Size

Paid to G. Kotenwanamme Canichapue 1500 |

the Sum of Fupees One thousand & Five hundered Rupees Only

Towards F.D.P

Preparty

Approved by

Audited by

G. Kotenwanamme

Receiver Signature

PRINCIPAL SRK INSTITUTE OF TECHNOLOGY ENIKEPADU, VIJAYAWADA-521 108.

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## CERTIFIC ATTE

This is to certify that Koteswaramma gangireddy

of S.R.K.institute of technology, Enikepadu, Vijayawada.

has Participated in the Navarral Edward Communication on Effective Pedagogy for Science

from 29.11.2022 to 03.12.2022 jointly organized by Departments of Physics and Mathematics, JMJ College for Women (Autonomous), Tenali.

Convener Dr. S. Uma Maheswari

Dr. S. Uma Maheswari HoD, Mathematics C. M. Anite

Organizing Secretary Ms. C.M. Anitha HoD, Physics Principal Dr. Sr. Shiny KP

Juleele

PRINCIPAL SRK INSTITUTE OF TECHNOLOGY FNIKEPADU, VIJAYAWADA-521 108. Truland

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Enikepadu, Vijayawada 521108 Approved by AICTE, Affiliated to JNTUK, Kakinada (ISO 9001:2015 Certified Institution) Accredited with NAAC 'A' grade

#### Financial Support Request Letter

1.	Name of the Staff Member	: Dr.Mr.Ms. N. Gayat	re Devi
2.	Designation	: Assistant Profess	.01
3.	Department	: Science and Huma	nitics
4.	Conference / Publication / M Industrial Visit / Tours With	fembership Fee / Workshop / F	DP / Seminar / Training /
	9 4		y JMT College, Tenali
5.	Date & Duration of the Prog	green: 29-11-22 to 3-12.	22 & 5 dags
6.	Associating Professional B	ody / Agency: TMT College	for Women Tenali
7.	Financial support particular		
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D	nate: 24 -05 -20 23		Signature of the Staff Member
2.	Recommendations of the H Recommendations of the P	rincipal:	*Sanctioned / Not Sanctioned
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Account Department Accountant: Alimi Date: 24 5

No.

# SRK INSTITUTE OF TECHNOLOGY

ENIKEPADU, VIJAYAWADA - 521 108. Ph.: 2843839

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he Sum of RupeesOne	thousand	a affine h	undered 1	Rupees Only
owards F-D.P				
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₹ 1500/-				N. Cayoto



# JMJ COLLEGE FOR WOMEN ((AUTONOMOUS), TIENALI



Affillated to Acharya Nagarjuna University Montspet (P.O), TENALI-522202, Guntur Dt., Andhra Pradesh. Colege Email: jmjtenali@gmall.com Website: jmjcollege.ac.in Phone: 08644-227994

# CERTIFICATIE

This is to certify that NUNNA GAYATRI DEVI

of SRK Institute of Technology

has Participated in Five Day National Level Online FDP on Effective Pedagogy for Science

from 29.11.2022 to 03.12.2022 jointly organized by Departments of Physics and Mathematics, JMJ College

for Women (Autonomous), Tenali.

Dr. S. Uma Maheswari HoD, Mathematics

C. M. Anithe

Organizing Secretary Ms. C.M. Anitha HoD, Physics

Dr. Sr. Shiny KP

Principal



#### Enikepadu, Vijayawada 521108 Approved by AICTE, Affiliated to JNTUK, Kakinada (ISO 9001:2015 Certified Institution) Accredited with NAAC 'A' grade

#### Financial Support Request Letter

1.	Name of the Staff Member	: Dr/Mr/Ms. S. Suman	* /
2.	Designation	: Assistant Professi	DY
3.	Department	: Science and Human	nitics
4.	Conference / Publication / I Industrial Visit / Tours With	Membership Fee / Workshop / FD	P / Seminar / Training /
-	Effective Pedago	gy for Science Org.	by IMI College
5.	Date & Duration of the Pro	gram: 29-11-22 to 3-12-2	z & 5 days
6.	Associating Professional E	Body / Agency: JMJ college	e for Women, Tena
7.	Financial support particular		
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	ii. Travelling Allowan	ices:	
	iii. Membership Fee		
	iv. Others (if any)	•	
D	Date: 29 -05 -7021		S. Suscay, Signature of the Staff Member
_	. Recommendations of the I	uop. L =	
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Account Department Accountant: Alm Date: 24 7 2 5

> PRINCIPAL SRK INSTITUTE OF TECHNOLOGY ENIKEPADU, VIJAYAWADA-521 108.

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No.

SRK INSTITUTE OF TECHNOLOGY

ENIKEPADU, VIJAYAWADA - 521 108. Ph.: 2843839

Name of A/c

Paid to. S. Suman Cast/Cheque 1500/
the Sum of Rupees One thousand & Five hundered Rupees Only

Towards. Faculty Development Programme

Prepared by

Approved by

Approved by

Receiver Signature



11



Hamper (F.C), TENALS-521202, Gurtur Ct., Andre Praciego. Cidega Erral: Imfterall@gmail.com Vittater Imftudega.ac.le Propie 54644-227954

## CERTIFICATE

This is to certify that Suman

SRK Institute of technology

has Participated in Five Day National Level Online FDP on Effective Pedagogy for Science from 29.11.2022 to 03.12.2022 jointly organized by Departments of Physics and Mathematics, JMJ College for Women (Autonomous), Tenall.

C. M. Anita

Dr. S. Uma Maheswari

Organizing Secretary Ms. C.M. Anitha HoD, Physics HoD, Mathematics

Principal Dr. Sr. Shiny KP

SRK INSTITUTE OF TECHNOLOGY



# SRK INSTITUTE OF TECHNOLOGY Enikepadu, Vijayawada 521108 Approved by AICTE, Affiliated to JNTUK, Kakinada (ISO 9001:2015 Certified Institution) Accredited with NAAC 'A' grade

#### Financial Support Request Letter

1. Nan	ne of the Staff Member	: Dr.Mr.Ms. S. Kalpana
2. Des	ignation	Assistant Professor
3. Dep	artment	Science and Humanities
4. Con	ference / Publication / Mustrial Visit / Tours With	details: ————————————————————————————————————
· E	Exective Pedagog	y for Science" Org. by JMJ college, Tenali
5. Date	& Duration of the Pros	ram: 29-11-22-to 03-12-23 & 5 days
	sociating Professional Bouncial support particular	ody/Agency: JMJ college for Women, Tenal
i.	Registration Charges	: 15001 -
ii.	Travelling Allowand	
iii.	Membership Fee	
iv.	Others (if any)	
Date: 2	4-05-2023	Signature of the Staff Member
	ommendations of the Ho ommendations of the Pr ommendations of the IQ	incipal:

Account Department Accountant: ماسا Date: عبراح (23 Pulleuf

No. YOUCHER Date 24-01-2023

SRK INSTITUTE OF TECHNOLOGY
ENIKEPADU, VIJAYAWADA - 521 108. Ph.: 2843839

Name of A/C

Puid to S. Kalpana (254/Cheque 1500)

the Sum of Rupees One thousand & Five hundered Rupees Only
Towards. F.O.P

Prepared by

Approved by

Audited by

riduning by

7 1500/-

Receiver Signature



# DMJ (COLLEGE FOR WOMEN ((AUTONOMOUS), TENALI



Affiliated to Achievya Nagarijula University
Munique (P.C), TENAL3-522202, Guntur Dt., Andrea Fradent.
Cologo Errolt Implement@pronolLcom Websites Implemenga.ac.in Process 08644-3277944

#### CHRADIC CATE

This is to certify that Kalpana Sanampudi

of SRK Institute of Technology

has Participated in Five Day National Level Online FDP on Effective Pedagogy for Science from 29/11.2022 to 03.12.2022 jointly organized by Departments of Physics and Mathematics, JMJ College for Women (Autonomous), Tenall.

Convener
Dr. S. Uma Maheswari
HoD, Mathematics

Organizing Secretary

Ms. C.M. Anitha HoD, Physics Principal Dr. Sr. Shiny KP

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PRINCIPAL
SRK INSTITUTE OF TECHNOLOGY
ENIKEPADU, VIJAYAWADA-521 108.

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Enikepadu, Vijayawada 521108 Approved by AICTE, Affiliated to JNTUK, Kakinada (ISO 9001:2015 Certified Institution) Accredited with NAAC 'A' grade

## Financial Support Request Letter

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Recommendations of the He     Recommendations of the Pr     Recommendations of the IQ	incipal: 7 Willy
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<ol><li>Associating Professional B</li></ol>	edy/Agency: ISSN Publication IJFANS
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### ISSN PRINT 2319 1775 Online 2320 7876

Research paper

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# A Novel MLP Technique on Augmented Dataset for Heart Attack Prediction

<sup>1</sup>Dr.D. Anitha Kumari, <sup>2</sup>Dr. A. Pathanjali Sastri, <sup>3</sup>Dr. A. Radhika, <sup>4</sup> CH.N.V.Jyothirmai

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#### DOI: 10,48047/IJFANS/\$1/116

ABSTRACT: Heart Attack is the leading life threatening disease because of the stress life facing by the humans. Traditional approaches are utilizing the 13 attributes related to medical tests like cholestral, threadmill test, and others. But the proposed model integrates the genetic algorithm known as "Particle Swarm Intelligence" algorithm with neural networks to perform the dimensionality reduction and classify the dataset using the customized neural network. The proposed model uses an augmented dataset that contains general information along with medical test reports, which are presented in the form of 55 attributes. The model also has the capability to predict the sub classification like mild, moderate, and severe. Neural Networks helps the automation system to extract the features automatically and implementation of genetic algorithm reduces the features and customization of layers helps the model to find the probability of each option and chooses the one with highest probability.

Keywords: Genetic Algorithms, Neural Networks, Customization, Attribute Selection, Augmentation

#### INTRODUCTION:

Greek words for "higher level" and "discovery" include "meta" and "heuristic." Typically, this approach finds outstanding answers by avoiding cost complexity. Let's talk about two of the many authors' definitions of these methodologies from various perspectives. In order to swiftly find solutions that are close to ideal, data is organised using learning techniques. A subordinate heuristic is driven by an iterative generating process that integrates cognitively disparate thoughts to achieve this. a master process that iteratively guides and modifies the activities of subpar heuristics to deliver high-quality results in a short amount of time. Iterations may include modifying a single solution—complete or insufficient—or a collection of connected solutions.

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#### Original Article

# Impact Of Digital Marketing Practices On Sales Growth And Sustainability Of Msmes

Mr. Neelapala Venkat<sup>1</sup>, Mrs. Devi Pathivada<sup>1</sup>, Mr. Banavathu Chinni<sup>1</sup>, Dr. A. S. Prasad<sup>4</sup>, Mr. Inti Prabhakara Rao<sup>4</sup>, Mr. Ramaswamy Palla<sup>4</sup>

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DOI: 10.47750/pnr.2022.13.510.429

#### Abstract

The study's goal is to uncover which aspects of digital advertising have the greatest impact on sales and revenue. The data provided is analysed using quantitative methods, specifically structural equation modelling, collecting representative data by employing procedures that are simple to implement. The data from an online survey of 150 micro, small, and medium-sized businesses (MSMEs) in the Hyderabud area were analysed. According to the data, digital marketing has a significant positive effect on business outcomes such as revenue growth and company lifespan. Digital marketing refers to promotional efforts spread throughout a wide variety of digital channels, such as the web, social media, and search engines (SEO). Among the most widely used digital platforms for long-term business success, the results suggest that social media is where most MSME owners spend their time.

Keywords: Digital marketing, sales performance, and sustainability

#### Introduction:

One of the most exciting and innovative areas of business today is marketing. Executives in contemporary marketing firms require a reliable method of monitoring their customers, competitors, and external environment. Online marketing and advertising are what IM is all about. Because of the widespread availability of the Internet and electronic commerce, marketing and advertising products is easier. "Electronic commerce" refers to any market that takes place solely in cyberspace. E-commerce, or electronic commerce, is the process of conducting business activities including buying, selling, and exchanging products and services online. Online marketing is simply one subset of the many activities that make up electronic commerce.

#### Literature review

The purpose of digital marketing is to help more firms take advantage of more efficient means of promotion and advertising to reach more potential clients. Using this kind of promotion, companies of all sizes may reach out to potential customers 24/7 via the internet (Agostini &Nosella, 2020; Maduku et al., 2016; Samoilenko &Osei-Bryson, 2018). So, the growth, productivity, and competitiveness of small businesses are all dependent on their use of digital technologies. Small and medium-sized enterprises (SMEs) that use digital and social media marketing have a better chance of expanding their customer bases and retaining them (Taiminen&Karjaluoto,

Journal of Pharmaceutical Negative Results

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# CHAKKA PAVANI

has participated in the 5-day online FDP on "Applications of Artificial Intelligence & Machine Learning in Civil Engineering" organized by the Department of Civil Engineering, Vishnu Institute of Technology during 24th November 2022 to 29th

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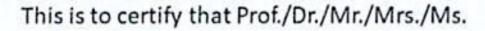


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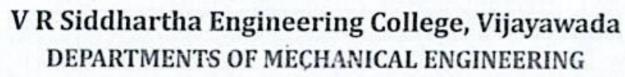
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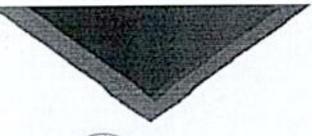
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This is certified that ANUSHA DERABGULA, Associate Professor of SRKIT participated & completed successfully AICTE Training And Learning (ATAL) Academy Blended/Hybrid FDP on "Data Analysis Tools & Techniques for Text and Speech Analytics" from 2022-11-14-2022-11-19 to 2022-11-21-2022-11-25 at LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING.

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Advisor-I, ATAL Academy Mamta Rani Agarwal



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Vastunagar, Mangalpalli (V), Ibrahimpatnam (M), Rangareddy (D), Telangana-501510.



# DEPARTMENT OF MECHANICAL ENGINEERING

## CERTIFICATE OF PARTICIPATION

This is to certify that Mr Bala Chinalingam Vanam, Assistant Professor

of SRK INSTITUTE OF TECHNOLOGY

\_attended One Week Faculty Development

Programme (Online mode) on "Engineering Drawing through AutoCAD" organized by Department of Mechanical Engineering, CVR College of Engineering, Hyderabad from 10th to 15th November, 2022.

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Co-ordinator

Dr. M. Venkata Ramana
Head of the Department

SRK INSTITUTE OF TECHNOLOGY

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Dr. K. Ramamohan Reddy Principal



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### CERTIFICATE OF PARTICIPATION

 Mr. Stanly kumar A	
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This is to certify that

SRK Institute of Technology

Participated the One-Day National Workshop on

A WAY TO PROCEED AND SELF-EVALUATION OF THE INSTITUTION

conducted on the eve of World Quality Week on 12th November, 2022 organised by Internal Quality Assurance Cell (IQAC), Vignan's Foundation for Science, Technology and Research Deemed to be University.

Dr. M. Ramakrishna Protestra \* Doubli (OAC) PRINCIPAL
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DLOGY

Dr. P NAGABHUSHAN Vice-Chancellor



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This is to certify that Mrs. Paruchuri Jayasri from S.R.K. Institute of Technology, Vijayawada has participated and successfully completed the 5-day Online FDP on the theme "Inculcating Universal Human Values in Technical Education" organized by All India Council for Technical Education (AICTE) from 31st October to 4th November 2022.

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Dr. Rajneesh Arora Chairman

National Coordination Committee for Induction Program

Prof. Rajive Kumar Member Secretary, AICTE

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Industrial Engineering Journal

ISSN: 0970-2555

Volume: 51, Issue 11, No. 1, November 2022

#### USE MACHINE LEARNING AND FAKE IMAGE PREPROCESSING

Dr.B.ASHALATHA, Associate Professor, CSE Department, SRK Institute of Technology, AP,

#### ABSTRACT

Recently fake images are more and more realistic with high-quality, even hard for human eyes to detect. Due to these fake images many fields like forensics are facing problems, even in social media also it became a problem because of the fake images. Many forensics people are trying to overcome this problem. As new types of fake images are emerging fast, the generalization ability of detecting new types of fake images is absolutely an essential task, which is also very challenging.

#### INTRODUCTION

In digital images occupy an important position in different life's fields and image tampering has become affordable effortlessly, which results in a widespread of tampered and fake images through the internet and social media specifically..In this project we are designing LBP Based machine learning Convolution Neural Network called LBPNET to detect fake face images. Here first we will extract LBP from images and then train LBP descriptor images with Convolution Neural Network to generate training model. Whenever we upload new test image then that test image will be applied on training model to detect whether test image contains fake image or non-fake image. Local binary patterns (LBP) is a type of visual descriptor used for classification in computer vision and is a simple yet very efficient texture operator which labels the pixels of an image by thresholding the neighborhood of each pixel and considers the result as a binary number. Due to its discriminative power and computational simplicity, LBP texture operator has become a popular approach in various applications. It can be seen as a unifying approach to the traditionally divergent statistical and structural models of texture analysis. Perhaps the most important property of the LBP operator in real-world applications is its robustness to monotonic gray-scale changes caused, for example, by illumination variations. Another important property is its computational simplicity, which makes it possible to analyze images in challenging real-time settings.

The LBP feature vector, in its simplest form, is created in the following manner:

Divide the examined win v into cells (e.g. 16x16 pixels for each cell).

For each pixel in a cell, compare the pixel to each of its 8 neighbors (on its left-top, left-middle, left-bottom, right-top, etc.). Follow the pixels along a circle, i.e. clockwise or counter-clockwise.

Where the center pixel's value is greater than the neighbor's value, write "0". Otherwise, write "1". This gives an 8-digit binary number (which is usually converted to decimal for convenience).

Compute the histogram, over the cell, of the frequency of each "number" occurring (i.e., each combination of which pixels are smaller and which are greater than the center). This histogram can be seen as a 256-dimensional feature vector.

Optionally normalize the histogram.

Concatenate (normalized) histograms of all cells. This gives a feature vector for the entire window. The feature vector can now be processed using the Support vector machine, extreme learning machines, or some other machine learning algorithm to classify images. Such classifiers can be used for face recognition or texture analysis.

#### PROPOSED SYSTEM

Now-a-days biometric systems are useful in recognizing person's identity but criminals change their appearance in behaviour and psychological to deceive recognition system. To overcome from this problem we are using new technique called Deep Texture Features extraction from images and then building train machine learning model using CNN (Convolution Neural Networks) algorithm. This



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Jul-Oct 2022

(12 week course)

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This is to certify that Mr. D. ROGNATHA RAO has participated & completed successfully a one-week online AICTE Short Term Training Programme (Phase II) on "Finite Element Analysis with ANSYS Workbench" from 06/10/2022 to 15/10/2022, organized by the Department of Mechanical Engineering, Srinivasa Ramanujan Institute of Technology, Ananthapuramu.

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Dr D. Sai Chaitanya Kishore, Ph.D.,

HOD, ME & COORDINATOR

Citt.

Dr. T. Hitendra Sarina, Ph.D

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1. Name of the Staff Member : Dr./Mr./Ms. N. Neelima Priys 2. Designation : Associate Professor 3. Department : Computer Science & Computer & Computer Science & Computer & C	
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### PROUDLY PRESENTED TO

# Dr. Neelima Priyanka Nutulapati

of SRK Institute of Technology

for successful completion of a Five Week Faculty Development Programme on

"FAMILIARIZATION SESSIONS ON FILING IP IN REAL-TIME"

(Sep 03 - Oct 01, 2022)

with a consolidated score of 95 %

Online Assignments

95/100

Sessions attended

13/15

Organized by

Intellectual Property Rights (IPR) Cell, Mohan Babu University

(Erstwhile Sree Vidyanikethan Engineering College (Autonomous))

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Dr. K. K. Baseer

**IPR Cell Coordinator** 

PRINCIPAL SRK INSTITUTE OF TECHNOLOGY ENIKEPADU, VIJAYAWADA-521 108. Dr. B. M. Sathish

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3.	Department	: Science and Humanities
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#### SHEAF REPRESENTATION OF ALMOST BOOLEAN ALGEBRAS

R. C. Mani<sup>1</sup> K. Krishna Rao<sup>2</sup>, K. Rama Prasad<sup>3\*</sup>and Ch. Santhi Sundar Raj<sup>4</sup>

Department of Mathematics, PVP Siddhartha Institute of Technology, kanuru, Vijayawada-520007, A.P., India.

<sup>2</sup>Department of Mathematics, SRK Institute of Technology, Enkipadu, Vijayawada-521108, A.P., India.

3,4 Department of Engineering Mathematics, Andhra University Visakhapatnam- 530 003, A.P., India.

#### Abstract

An Almost Boolean Algebra  $(A, \land, \lor, 0)$  (abbreviated as ABA) is an Almost Distributive Lattice (ADL) with a maximal element in which for any  $x \in A$ , there exists  $y \in A$  such that  $x \land y = 0$  and  $x \lor y$  is a maximal element in A. If  $(S, \Pi, X)$  is a sheaf of nontrivial discrete ADLs over a Boolean space such that for any global section f, support of f is open, then it is proved that the set  $\Gamma(X, S)$  of all global sections is an ABA. Conversely, it is proved that every ABA is isomorphic to the ADL of global sections of a suitable sheaf of discrete ADL over a Boolean space.

AMS Subject Classification: 06D99, 06D15

Key words: Almost Boolean Algebra (ABA), discrete ADL, dense element, maximal element, global section, support.

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This is to certify that Anumolu Krishna Priya From SRK INSTITUTE OF TECHNOLOGY,

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has participated in the 5-Days National Level Faculty Development Programme (FDP) (Online) on "Application of Geoinformatics and Remote Sensing in Engineering & Technology" conducted from 19th to 23rd Sep 2022 organized by Dept. of Civil Engineering.

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Prof. Azharoddin Perampalli Convener Rashin

Prof. Rashmi Yadıyapur Convener & HOD Sey !

Dr. B.J. Patil Principal

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Department of Civil Engineering

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a Five Day Faculty Development Programme on	"Multidisciplinary and Mo	deling approaches in
Civil Engineering practices", organized by Depa	rtment of Civil Engineering	in collaboration with
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Concrete Institute" Vijayawada Chapter, Andh	ra Pradesh from 13th – 17	th September, 2022
at Dhanekula Institute of Engineering & Technol		
Dr. Vinay Gaddam Dr. Jagadish Vengala Convenor & H.O.D Ghairman, ICI-VJWC	Dr. Rakesh K. Ranjan  DST centre of Excellence  PRINCIPAL  PRINCIP	Dr. Ravi Kadiyala  Principal, DIET



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#### Financial Support Request Letter

1.	Nam	e of the Staff Member	: Dr/Mr/Ms J:	Siva Naga Jyothi
2.	Desi	gnation	: Assistant	11 (1
3.		rtment		Ecionce & Engineering
4.		erence / Publication / N strial Visit / Tours Witi		shop / FDP / Seminar / Training /
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5.	Date	& Duration of the Pro	gram: 12/17/22	16/19/22
6,	Asse	ociating Professional B	lody/Agency: KMM	
7.	Finar	ncial support particular	500/-	
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# KMM COLLEGE OF ARTS AND SCIENCE THRIKKAKARA, ERNAKULAM, KERALA-682021

(Affiliated to MG University, Approved by AICTE and Govt. Of Kerala)



## CERTIFICATE OF PARTICIPATION

This certificate is awarded to J.SIVANAGAJYOTHI

SRKIT

For participating in A Five Day National Level FDP on "CRYPTOCURRENCY, BLOCKCHAIN &CYBER SECURITY" organized by Department of Commerce and Department of Computer Science, KMM College of Arts and Science, Thrikkakara from 12<sup>th</sup> September 2022 to 16<sup>th</sup> September 2022.

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NASIYA K.A. Convenor & HOD PG Department of Commerce Deepa

DEEPA V A
Convenor & HOD
UG Department of
Computer Science



Prof. V.U. NOORUDHIN Principal

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# SRK INSTITUTE OF TECHNOLOGY Enikepadu, Vijayawada 521108 Approved by AICTE, Affiliated to JNTUK, Kakinada (ISO 9001:2015 Certified Institution) Accredited with NAAC 'A' grade

#### Financial Support Request Letter

1.	Name of the Staff Member	: Dr.Mr.Ms. M. Ekampuran Naide
2.	Designation	: Associate Professor
3.	Department	: Computer Science & Eggineering
4.	Conference / Publication / M Industrial Visit / Tours With	Membership Fee / Workshop / FDP / Seminar / Training /
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# KMM COLLEGE OF ARTS AND SCIENCE THRIKKAKARA, ERNAKULAM, KERALA-682021

(Affiliated to MG University, Approved by AICTE and Govt. Of Kerala)



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NASIYA K.A. Convenor & HOD PG Department of

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Prof. V.U. NOORUDHIN Principal

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#### Financial Support Request Letter

1	Name	of the Staff Member	: Dr.Mr.Ms. K. Chaitarya
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2.	Desig	nation	: Associate Professor
3.	Depar	tment	: Computer Science & Engineering
4.		rence / Publication / N trial Visit / Tours With	Membership Fee / Workshop / FDP / Seminar / Training / details:
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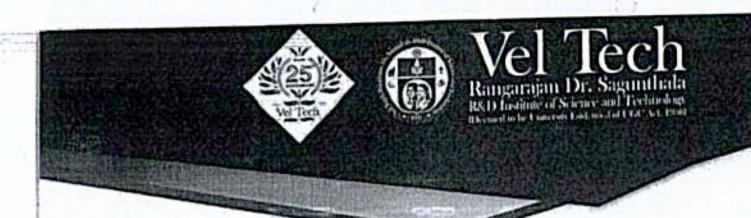
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# Certificate of Participation

This certifies that Dr. / Mr. /Ms. Dr. J. Chaitanga designated as Assaude.

Drofessory from S. R. J. Joseph & Technology has participated in One Week International Faculty Development Programme (IFDP) entitled on "Intellectual Property Rights and Cyber Laws" organized by the School of Law jointly with the Office of International Relations at Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and

Prof. Olivia Tan Swee Leng

Resource Person Multimedia University Malaysia

Dean - School of Law

TITUTE OF TECHNOLOGY

Technology, Chennai held from 7th September, 2022 to 13th September, 2022.

Dean - International Relations

S. Salivet

Prof. S. Salivahanan

Vice Chancellor



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#### Financial Support Request Letter

1.	Name of the Staff Member	: Dr/Mr/Ms	-knishra phya
2.	Designation	: Assist	art possos
3.	Department	:	
4.	Conference / Publication / M Industrial Visit / Tours With	details:Designi	pop/FDP/Seminar/Training/
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Designing Outcomes-focused questions

Sep 13, 2022

Date of Completion

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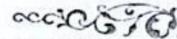
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#### Indian Society for Technical Education Shaheed Jeet Singh Marg New Delhi – 110 016

#### CERTIFICATE

This is to certify that Mr/Ms. AVIRNENI VEDA SRI has successfully completed ISTE approved SF-STTP/FDP Programme on "Applications of Machine Learning using Python for Interdisciplinary Research" held during 29.08.2022 to 03.09.2022 organized by Dhanekula Institute of Engineering & Technology, Vijayawada, Andhra Pradesh.

P-2022/5172

Executive Secretary

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## Financial Support Request Letter

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#### Financial Support Request Letter

Name of the Staff Member	: Dr.Mr.Ms. J. Ashok
2. Designation	: Associate Professor
3. Department	: Science and Humanities :
4. Conference / Publication / I Industrial Visit / Tours Wit	Membership Fee / Workshop / FDP / Seminar / Training / h details: Recent Advances On Motorial
Characterizations	
5. Date & Duration of the Pro	gram: 29-8-22 to 3.9-22 & One Week
6. Associating Professional E	Body/Agency: Dept-of Physics, Krishna University, Me
	rs: 1500/-
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# SRK INSTITUTE OF TECHNOLOGY

ENIKEPADU, VIJAYAWADA - 521 108, Ph. : 2843839

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# KRISHNA UNIVERSITY, MACHILIPATNAM Department of Physics

# One Week Online FDP On Recent Advances On material Characterizations

Certificate of Participation

This is to certify that Dr.J.Ashok, Associate Professor of SRK Institute of hnology Enikepadu has participated in One Week FDP on "Recent Advances on atterial Characterizations" organized by Department of Physics, Krishna University, and chilipatnam from 29.08.2022 to 03.09.2022.

Principal

Prof. YAVASN Maruthi

Registrar

Dr. M Rami Reddy

SRK INSTITUTE OF TECHNOLOGY
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### Financial Support Request Letter

1. Na	me of the Staff Member	Dr.Mr.Ms. Dy. M. Vecrabhadralas.
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4. Co	nference / Publication / M ustrial Visit / Tours With	details:
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International Journal of Scientific Research and Engineering Development -- Volume 5 Issue 4, July-August 2022

Available at www.iisred. com

RESEARCH ARTICLE

**OPEN ACCESS** 

A study on Internet Banking in India: Popularity Trends

\*Dr. M. Veerabhadra Rao

\*\* B.V.S.S. Subba Rao

#### Abstract

In the 1990s, the banking sector in India saw greater emphasis being placed on technology and innovation. Banks began to use technology to provide better quality of services at greater speed. The Internet Banking is becoming one of the fastest growing technologies that is playing a significant role in the daily lives of human beings. Internet Banking and Mobile Banking made it convenient for customers to do their banking from geographically diverse places. Banks also sharpened their focus on rural markets and introduced a variety of services geared to the special needs of their rural customers. The Internet is slowly gaining popularity in India. The Internet Banking is changing the banking industry and is having the major effects on banking relationships. Internet Banking involves delivery of banking products and services. At present many of the banks around the world have web presence in form of ATMs, Internet Banking, Support services etc. In the world of banking, the development in information technology has an enormous effect on development of more flexible payment methods and more- user friendly banking services. Electronic Banking services are new and the development and diffusion of these technologies by financial institutions is expected to result in more efficient banking system.

Key words: Internet Banking, Support services, technology, innovation.

#### 1.1 Introduction

Banking in India originated in the last decades of the 18th century. The oldest bank in existence in India is the State Bank of India a government-owned bank that traces its origins back to June 1806 and that is the largest commercial bank in the country. Central banking is the responsibility of the Reserve Bank of India 1935 formally took over these responsibilities from the then Imperial Bank of India, relegating it to commercial banking functions. After India's independence in 1947, the Reserve Bank was nationalized and given broader powers. In 1969 the government nationalized the 14 largest commercial banks; the government nationalized the six next largest in 1980. Currently, India has 96 scheduled commercial banks (SCBs) - 27 public sector banks (that is with the Government of India holding a stake), 31 private banks (these do not have government stake; they may be publicly listed and traded on stock exchanges) and 38 foreign banks. They have a combined network of over 53,000 branches and 17,000 ATMs. According to a report by ICRA Limited, a rating agency, the public sector banks hold over 75 percent of total assets of the banking industry, with the private and foreign banks holding 18.2% and 6.5% respectively.

\*Professor, Dept. of Business Administration, SRK Institute of Technology, Enikepadu.

\*\*Assistant Professor, Dept. of Business Administration, SRK Institute of Technology, Enikepadu.

Email: bvsssubbarao@gmail.com

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Page 671



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### Financial Support Request Letter

Name of the Staff Memb	per : Dr/Mr/Ms. MX. B.V.1.5.10660 Rao
2. Designation	: Aut prof.
3. Department	: M· B· A
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International Journal of Scientific Research and Engineering Development -- Volume 5 Issue 4, July-August 2022

Available at www.lisred.com

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\*Professor, Dept. of Business Administration, SRK Institute of Technology, Enikepadu.

\*\*Assistant Professor, Dept. of Business Administration, SRK Institute of Technology, Enikepadu. Email: bysssubbarao@gmail.com

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#### Financial Support Request Letter

1.	Name of the Staff Member	: Dr.Mr.Ms. T. V. Naga Lakshmi	
2.	Designation	: Associate Professor	
3.	Department	: Science and Hamanities.	*
4.	Conference / Publication / M Industrial Visit / Tours With	Sembership Fee / Workshop / FDP / Seminar / Training / details: Emerging Technologies In Cheroical Engineering	
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ENIKEPADU, VIJAYAWADA - 521 108. Ph.: 2843839

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Puid to Dr.T. U. Novgalakshmi. Cash/Cheque. 5000 1
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Towards. Faculty development Programme.

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SRK INSTITUTE OF TECUUAL ARY

One Week Training Program on

Emerging Technologies in Chemical Engineering: From Theory, Experiments to Industry Applications

Under DST-STUTI programme of Indian Institute of Technology (ISM) Dhanbad - 826004 Funded by : Department of Science and Technology (DST), Government of India

Organised by:

Department of Chemical Engineering, National Institute of Technology Durgapur, Durgapur - 713209 22nd August to 28th August 2022

# Certificate of Participation

This is to certify that Dr./Mr./Ms. .T. V. Nagala-Kahmi. of SRK Institute of Technology attended the One week Training Program on "Emerging Technologies in Chemical Engineering: From Theory, Experiments to Industry Applications" from 22nd August to 28th August 2022, Organised by the Department of Chemical Engineering, National Institute of Technology Durgapur, Durgapur - 713209 under the aegis of DST-STUTI programme of Indian Institute of Technology (ISM) Dhanbad - 826004, Funded by: Department of Science and Technology (DST), Government of India.

Prof. Ravi K. Gangwas RK INST



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# Financial Support Request Letter

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This is to certify that Dr/Smt/Sri. Dr. K. Krishna Rao from SRKIT

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organized by Internal Quality Assurance Cell (IQAC) of

Sri Durga Malleswara Siddhartha Mahila Kalasala, Vijayawada on 27th August, 2022.

Co-Ordinator- IQAC



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In Association with

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This is to certify that Dr. / Er. / Mr. / Ms. ANUMOLU KRISHNA PRIYA

has participated in Technical Webinar on "INTRODUCTION TO HYSD BARS AND UNDERSTAND GOOD AND BAD CONSTRUCTION PRACTICES" by Er. Anirudha Shah AGM - TECHNICAL SK STEEL TECH, India, organized by Department of Civil Engineering in association with ICI-Student Chapter on On 26th August 2022.

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Effect of Process Parameters on Microstructure and Mechanical Properties of Al-11.5%Si-1%Mg/bimodal SiC<sub>(m-n)</sub>composites

Original Paper Published: 02 August 2022

Volume 15, pages 725-737, (2023) Cite this article



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Aims and scope

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G. Arumugam , S. Saravanan, S. Mohamed Iqbal & P. Kishorekumar

60 Accesses 3 Citations Explore all metrics →

### Abstract

Bimodal size SiC particles reinforced Al-Si alloy composites were fabricated by powder metallurgy route. Three different bimodal reinforcements with various volume fractions of micro and nano sized SiC particles were dispersed in Al-11.5%Si-1%Mg matrix by mechanical alloying for 10 h. The composite powders were hot pressed at 580 °C, 600 °C and 620 °C in a vacuum atmosphere with different cooling rates (10 °C/min, 15 °C/min and 20 °C/min). The microstructural changes of bimodal SiC<sub>(m-n)</sub> in the matrix material were carried out using OM, SEM and TEM with energy dispersive spectroscopy (EDS). The sample experiments were implemented based on Taguchi L<sub>2</sub> OA with three parameters of bimodal reinforcement, sintering temperature and rate of cooling respectively. The measurement of mechanical properties and the sample spectroscopy.



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#### ORIGINAL PAPER



## Carcinogenic Chromium (VI) Sensing Using Transducing Characteristics of Fiber Bragg Grating and Physical Swelling of Hydrogel

B. M. Pratima<sup>1</sup> · P. V. N. Kishore<sup>2,3</sup> · J. Ashok<sup>4</sup> · M. Satyanarayana<sup>5</sup> · P. Krishna Reddy<sup>6</sup> · N. Rajeswara Rao<sup>7</sup> · D. Vijaya Lakshmi<sup>8</sup>

Received: 25 May 2022 / Revised: 8 July 2022 / Accepted: 13 July 2022

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#### Abstract

A Chemo-mechanical-optical sensing approach for the detection of hexagonal chromium (Cr<sup>6+</sup>) metal ion is demonstrated. A new sensor head is designed by epoxying fiber Bragg grating (FBG) on a thin silicon membrane beneath which a Chromium (VI) responsive hydrogel is embedded. When the gel is exposed to chromium spiked solutions, it a iffers a volume change due to its stimulus responsive property and deforms a silicon membrane which in turn causes a wavelength peak shift of FBG. Hydrogel synthesized from the blends of (3-Acrylamidopropyl)—trimethylammonium chloride is used for the purpose. The relation between FBG peak shifts with change in volume of hydrogel due to it swelling is experimentally established. The FBG wavelength peak shift is directly correlated with the concentration of the Cr (VI) metal ion. The estimated sensitivity and resolution of the sensor are 0.1 nm/ ppb with a limit of detection of the sensor is 0.75 ppb. The sensor has demonstrated good sensitivity, selectivity, and repeatability.

Keywords Fiber Bragg grating (FBG) · Cr (VI) sensor · Hydrogels · Stimulus response · Physical swelling

#### 1 Introduction

Industrial revolution has resulted in elevated water contamination with heavy metal ions which is a major health threat both to humans and aquatic animals. Heavy metal ions are one of the major causes of water toxicity and carcinogenicity but their contribution towards toxicity is more [1]. Disorders of central nervous system, kidneys,

☑ P. V. N. Kishore jidankishore@gmail.com

Extended author information available on the last page of the article

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## Insights into Color Psychology in Marketing, Advertising & Promotion

Dr. M. Veerabhadra Rao<sup>1</sup> B.V.S.S. Subba Rao<sup>2</sup>

<sup>1</sup>Professor <sup>2</sup>Assistant Professor <sup>1</sup>Department of MBA <sup>2</sup>Department of MBA

<sup>1</sup>SRK Institute of Technology, Vijayawada <sup>2</sup>SRK Institute of Technology, Vijayawada.

Studies have been shown that colour:

#### ABSTRACT

Colour Psychology is the study of colour as a determinant of human behavior. A wide range of factors can influence the relationship between environment and colour, including culture, religion, natural environment, gender, race and genetics. It is important to study the psychology of colour manipulation and color use of prior Promoting a business through marketing and advertising campaign. This is because of a colour can represent many different energies, emotions, and feelings. Colour is foundational to the visual identity of your brand in all it expressions excellence-logs, packaging. environments, and all forms of marketing communication.

Keywords: Psychology of colour, marketing, advertising, brand, consumer, culture.

#### INTRODUCTION

The most successful and prominent brands in the world are defined by their colours, as a marketer, it's important to utilize colours effectively and efficiently consider what they say about their business, colour increase brand recognition and brand recognition directly links to consumer confidence to buy the product.

When marketing new products it is crucial to consider that consumers place visual appearance. Colours are an integral part of brand strategy. The colour choosen to represent your brand can subconsciously communicate a variety of messages, and it is proven through market research that colour directly impacts the consumer.

#### THE ROLE OF COLOUR IN MARKETING

Colour is a form of nonverbal communication and an important part of our daily lives. The understandings of emotion that evoke have been cultivated since birth and vary depending on age, geographic, location, and gender (examples: blue for boys, pink for girls). Applying colour theory is one of the most powerful methods of creating customer appeal.

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- Increase brand recognition by up to 80%
- Improves readerships as much as 40%
- Increases comprehension by 73%
- Can be up to 85% of the reason people decide to buy

#### IMPORTANCE OF COLOUR IN MARKETING

When marketing new products it is crucial to consider that consumers place visual appearance. Colour impacts moods, sales and guarantee of coming back to a particular brand. When creating your own brands, it is important to note that there is an impact of colour have a creation and sales.

The use of colour in the marketing of your business, advertising & promotion your product, can send their positive or negative messages, creating a good or bad perception of your product. Colour also has a functional impact on readability, eye-strain, and ability to attract attention. This is important in choosing colours for website pages, prints ads and other marketing media. Colour is instrumental in attracting consumer attention to media advertisements.

- The most visible colour is yellow
- Hard colours (red, orange, and yellow) are more visible and tend to make objects look larger and closer. They are easier to focus.
- Soft colours (violet, blue, and green) are less visible and tend to make objects look smaller and further away.

With relation to marketing, colour psychology has become an important part of the visual appearance and brand recognition of companies and products. Colour is perceived differently by everyone and through the use of different mediums.

Colours are commonly perceived to have certain meaning. The chart below gives perceived meanings of different colours. The F represent Functional (fulfils a need or solves a problem) and the S represents Sensory-social (conveys attitudes, status, or social approval).

It is imperative that the colour being used in your marketing reflects the products promoted your corporate branding, influences to your target



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# Insights into Color Psychology in Marketing, Advertising & Promotion

Dr. M. Veerabhadra Rao1 B.V.S.S. Subba Rao2

Professor <sup>2</sup>Assistant Professor <sup>1</sup>Department of MBA <sup>2</sup>Department of MBA

SRK Institute of Technology, Vijayawada 2SRK Institute of Technology, Vijayawada.

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# INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

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## A STUDY ON BUSINESS ANALYTICS: A BUSINESS ENABLER

<sup>1</sup>Dr. T. Rama Devi <sup>2</sup>Dr. B. Krishnaiah <sup>3</sup>Dr. N. Suresh Babu <sup>1</sup>Professor & Head, <sup>2</sup>Assoc, Professor & Head, <sup>3</sup>Assistant Professor <sup>2</sup>Department of Business Administration, <sup>2</sup>SRK Institute of Technology, Enikepadu, Vijayawada, India.

Abstract: Business Analytics has come out as a potential business enabler in both public as well as private sector and is one of the rapid growing fields. By implementing Business Analytics inventiveness in their organisations, decision makers can integrate different data sources, predict trends, improve performance, key performance indicators, identify business opportunities, and make superior and informed decisions. The importance of this study is based on two aspects that is one is it provides a working definition, background, and a review of Business Analytics (BA), or Business Intelligence (BI), or Big data (BD) theory and practice. Second one is it discusses about current trend of Business Analytics, Business intelligence and Big data.

Index Terms - Business Analytics, Business intelligence, Big data, Decision making and Trend analysis.

#### I. INTRODUCTION

All over different public and private sector companies illustrate and maintain vast amount of data on their customers, product and services provided by the companies. To leverage the data stored and maintained in various digital platforms like data base, data warehouse, and to convert the data into actionable insights a new field called Business Analytics, or big data, or Business intelligence has emerged in recent periods. Business Analytics has evolved and become a part of each and every business decision making process, and it has the potential to transform business as it empowers decision-makers with data and supports them to make strategic, operational as well as tactical decisions.

II. Importance of the study:

Business Analytics gives decision makers the power to integrate multiple data sources and discover more insights in them, thus enabling them to gain a holistic view of their business and customers improve operational efficiency, move towards a data driven decision making environment, and delivery business vital solutions. Business analytics also helps to companies exploit on the value of historical and real time data by harness the power of statistical and mathematical models. By using such models, managers can monitor key metrics and operational data and measure and manage corporate performance. Decision makers can integrate disparate data sources. Predict trends, improve performance indicators by implement Business analytics initiatives in their firms, to make better and informed decisions. Hence it is important to study the working definition, background and review of Business analytics and the current trend of Business analytics.

#### III. Objectives of the study:

- 1) To understand the concept & importance of Business Analytics or Business Intelligence or Big Data.
- 2) To identify the Buzzword from usage by the authors in the research papers through analysis.

#### IV. Review of Literature:

Business Analytics (BA) may be defined as "a broad category of applications, technologies, and processes for gathering, storing, accessing, and analyzing data to help business users make better decisions" (Watson, 2009). Vendors and academics interchangeably use "Business Analytics (BA)", "Business Intelligence (BI)" and "Big Data (BD)" to refer to similar topics. For instance, the term "business intelligence" is used by the information technology community, whereas "business analytics" is preferred by the business community (Sircar, 2009). In this study however, the term "Business Analytics" is used to be consistent with the leading vendors and academia.

The growing use of information technology (IT) in the business world has led to the developing of large and complex datasets for various organizational functions. Understanding their businesses and undirections decisions and operate large and complex has become an important challenge for organizations. The IT industry refers to the least the Big Data to indicate the complexity and size of data sets. Traditional database applications do not have the capabilities to analyze such big data and address the decision-making needs of organizations. BA is the current solution for analyzing big data by using advanced



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VIJAYA INSTITUTE OF TECHNOLOGY FOR WOMEN

AN ISO 9001: 2015 CERTIFIED INSTITUTION AFFILIATED TO JNTUK KAKINADA Enikepadu,VIJAYAWADA-521 108. (A.P.) Phone: 6866-2844444, e-mail : vijayatechfw@gmail.com web : www.vitw.in

Paladugu. So, chas. tha Dr./Mr./Ms.

for participating in one week Faculty Development Programme on "ARTIFICIAL INTELLIGENCE & DATA ANALYTICS" organized by the Department of Computer Science and Engineering, VIJAYA INSTITUTE OF TECHNOLOGY FOR WOMEN, Vijayawada during 6th to 11th June 2022.

Dr. V. Suma Avani Coordinator

Dr. A. C. P. Ranjani

HoD, Dept. of CSE

Dr. G. Chenchamma Principal



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# ENHANCING SECURITY OF DATA IN CLOUD STORAGE USING DECENTRALIZED BLOCKCHAIN

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ABSTRACT: To maintain the privacy and security of data various algorithms are used. The objective of every system is to achieve confidentiality, integrity, availability (CIA). However, the existing centralized cloud storage lacks to provide these CIA properties. So, to enhance the security of data and storing techniques, decentralized cloud storage is used along with block chain technology. It effectively helps to protect data from tampering or deleting a part of data. The data stored in block chain is linked to each other by a chain of blocks. Each block has its hash value, which is stored in next block. After performing the encryption method data is converted into unreadable form, to get the original message back intended user must have key which is used while encryption process. Thus it reduces the chances of data altering. For this purpose, SHA-512 Hashing algorithm is used. Hashing algorithm is used in many aspects, where the security of data is required such as message digest, password verification, and digital certificates and in block chain. By the combination of these methods and algorithms, data becomes more secure and reliable. However, with the help of various algorithms, the security of the data can be enhanced. Also, Advance Encryption Standard (AES) is used to encrypt and

decrypt the data due to the significant features of this algorithm.

ISSN NO: 0886-9367

Keywords-SHA-512 Hashing algorithm

### 1. INTRODUCTION

A blockchain is a distributed database that is shared among the nodes of a computer network. As a database, a blockchain stores information electronically in digital format. Blockchains are best known for their crucial role in cryptocurrency systems, such as Bitcoin, for maintaining a secure and decentralized record of transactions. The innovation with a blockchain is that it guarantees the fidelity and security of a record of data and generates trust without the need for a trusted third party. One key difference between a typical database and a blockchain is how the data is structured. A blockchain collects information together in groups, known as blocks that hold sets of information. Blocks have certain storage capacities and, when filled, are closed and linked to the previously filled block, forming a chain of data known as the blockchain. All new information that follows that freshly added block is compiled into a newly formed block that will then also be added to the chain once filled.Blockchain is a shared, immutable ledger

Volume XIV, Issue III, JUN/2022

Page No:590



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# POTHOLE AND SPEED BREAKER DETECTION USING DEEP LEARNING TECHNIQUES

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Abstract- As the world is modernizing in each and every aspect on a day to day busis and getting prosperous, so the people are. By this growth in one's individual life in the society is getting an better living standards, under which personal vehicle is emerging us a busic need for everyone to go about in daily life, so that number of vehicles is increasing but road conditions are of mostly the same state or say even the worse keeping all this scenario in the mind we have designed a model to detect and predict the potholes and different anomalies present in the road using different suitable algorithms of machine learning and deep learning. For the execution of the project first, we collected the different road image samples and applied various computer vision operations such as preprocessing steps (different blur, smoothing), morphological operations, canny edge detection and decision true to detect the puthols. After we have the road images with petholes detected, we made a dataset out of it extracting feature and giving it to the deep neural network (DNN) to process further, and it predicts the pothsics using linear regression at the end of the process.

Keywords—Computer vision, Decision tree, Supervised Learning, Linear regression.

#### t. INTRODUCTION

In this modern era of smart cities smart Technologies and so many Technologies like IOT, machine learning, artificial intelligence and there are many more but still I see there is no as such methods of detection and prevention of potholes another kind of anomaly on the roads. We are growing as one of the fastest country in many sectors and automobile is one of them, people are buying insane number automobiles still we don't care about roads condition and that is where we need to understand that taking care of road condition is equal important as much as growing of automobile sector. We are facing heavy amount of losses of money, human life many more things due to this potholes anomalies present on the roads [1, 2]. Municipalities do their jobs of maintaining road's condition as lame as possible.

Like for example BMC Mumbai have potholes very bud Road conditions in their backyards only. So now you can see the level of ignorance and inefficiency towards maintaining road condition [3]. Now here only municipalities like BMC and DDA are not solely responsible for these irregularities present on the roads [4, 5]. It is more of that we don't have an efficient solution for providing the pothole location rampant in a particular area that comes under municipality because once municipality have the data, it can be used to analyze the area giving a more efficient solution. Now the question comes that to collect the data that too efficiently. What municipality body

will do that they will be appointing a team who will go for the survey of the roads coming under that particular municipality area? That team will gother data of potholes and report it the office [6]. But go like this it will take years to maintain road condition of a particular area. Proposed model will be detecting potholes and reporting them to the concern authority and further this will also predict them using machine learning to get a better In this modern era of smart cities smart Technologies and so many Technologies like IOT, machine learning, artificial intelligence and there are many more but still I see there is no as such methods of detection and prevention of potholes another kind of anomaly on our roads [7]. F are growing as one of the fastest country in many sectors and automobile is one of them, people are buying insane number automobiles still we don't care about roads condition and that is where we need to understand that taking care of road condition is equal important as much as growing of automobile sector [8, 9]. We are facing beavy amount of losses of money, human life many more things due to this potholes anomalies present on roads. Municipalities do their jobs of maintaining road's condition as lame as possible. Like for example BMC Mumbai have potholes very bad Road conditions in their backyards only [10]. So now you can see the level of ignorance and inefficiency towards maintaining road condition. Now here only municipalities tike BMC and DDA are not solely responsible for these irregularities present on the roads. It is more of that we don't have an efficient solution for providing the pothole location rampant in a particular area that comes under municipality because once municipality have the data, it can be used to analyze the area giving a more efficient solution [11, 12]. Now the question comes that to collect the data that too efficiently, What municipality body will do that they will be appointing a team who will go for the survey of the roads coming under that particular municipality area? That team will gather data of potholes and report it the office. But go like this it will take years to maintain road condition of a particular area [13]. In my proposed model we will be detecting potholes and reporting them to the concern authority and further we will also predict efficient solution for the problem.

#### II. KELATED WORK

This model a uses a simple and convenient smart phone application to detect and make a dataset for future usage and to report to the concerned authority, using GPS to locate it on map in the database [14]. The application uses the gyroscope and accelerometer already existed in the phone by the manufacturing company to get the right coordinate location of

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Page No: 2204



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# RAILWAY TRACK CRACK DETECTION USING DEEP LEARNING MODELS

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ABSTRACT: The detection of defects or cracks in rail track plays an important role in railway management, which prevents train accidents in both summer and rainy seasons. During summer, the cracks are formed on the track which slips the train wheel. In rainy environment, the rail tracks are affected by corrosion which also produced cracks on it. Methods: In present method, the cracks or defects are detected Echo image display device or semi conduction magnetism sensor devices which consumes more time. The proposed method enhances the track image using deep learning models to features extracted from the enhanced rail track image. These extracted features are trained and classified using neural network classifier which classifies the rail track image into either cracked or non-cracked image. The novelty of this work is to use soft computing approach for the detection of cracks in rail tracks. This methodology is trained by several crack images which are obtained from different environment. This method automatically classifies the current image based on the trained patterns, thus improves the classification accuracy. Findings: The performance of the proposed system achieves the accuracy rate of 94.9%, with respect to manually crack detected and segmented images.

www.jespublication.com

Keywords: railway track crack detection, deep learning models

### 1. INTRODUCTION

In the modern world, the role of railway network is an essential for the people around the world. The railway system consists of infrastructure, development and maintenance. The infrastructure of the railway network is the planning and construction of the rail tracks and establishing their contacts in railway junction. The development of the railway network is used to extent the tracks to the rural and interior areas of the village. The rail tracks are maintained by maintenance division of the railway network system. The rail tracks are severely affected by corrosion due to the air and floods during rainy season. They make cracks on the rail track which leads the accident of the trains. The quality of the rail track is important to prevent such defects in rail track and these cracks must be frequently checked to avoid accidents.

The procedure for capturing the rail track, in which the pre-checking vehicle is passed over the running track of the rail. The light source in this vehicle

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# RESEARCH ON THE KEY TECHNOLOGY OF NETWORK SECURITY BASED ON MACHINE LEARNING

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ABSTRACT: With the development of information technology, the huge number of network devices, applications, and the explosive expansion of network data have made the network environment increasingly complex, posing huge potential risks to network security. The targets of cyber attackers are no longer limited to cyber attacks on ordinary users, but they have shifted ther targets to network environments with related backgrounds such as enterprises, governments, and countries. The diversification of network services has generated massive amounts of Internet data, and traditional network security technologies have been difficult to meet the current needs of network security in terms of performance and selfadaptability. Research on network security based on machine learning has achieved many results, showing strong capabilities in processing massive data, automatic learning, detection and identification, and broadening the development of ideas in the field of network security. So combine machine learning-related technologies to improve intrusion detection performance and alarm correlation automation, and investigate key technologies such as machine learning-based network security situational awareness methods and dynamic data stream classification methods based on judgment feedback, in order to improve the detection performance, adaptive and generalization capabilities of machine learning-based network security technologies.

#### 1. INTRODUCTION

With the rapid development of information technology, thanks to the mature application of communication, big data and cloud computing, the results of Internet have benefited people's livelihood. economy, government and other aspects, and become a new driving force for national development. Internet entertainment, Internet travel, online education, etc., its user scale and economic benefits have grown significantly over the previous year. Internet technology, the development of network technology has brought convenience to the life of the public, but also brought a variety of security issues. which gradually developed specific cyber attack techniques for specific occasions. The targets of cyber attackers are not only limited to cyber attacks against the general public, such as obtaining passwords, malicious advertisements, and making illgotten gains. These cyber attackers have started to

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# GENDER CLASSIFICATION USING DEEP LEARNING

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ABSTRACT: Key facial features, gender, have been widely explored. Companies and organizations have investigated in related applications in several fields including insurance, retails, marketing, etc. It would bring tremendous benefit, which allow companies to easily identify their customer demographics. Several approaches have been proposed with remarkable results. However, because of the lack of open and multi-ethnic datasets, most modern age and gender estimating models were trained solely based on white people with Western facial features, and thus fall short with non-Caucasian people. In this paper, we are going to develop an applicable Wide ResNet model to estimate the age and the gender on faces. The proposed gender and face recognition technique using is verified for both test images of a man and a woman, a Transgender.

Keywords: Deep learning, Resnet model, face recognition technique.

#### 1. INTRODUCTION

As technology increases, the applications that combine the advanced fields of pattern recognition and image processing are used to find age and gender. In today's world, age plays a prominent role, when you appear for an interview, health check-ups. The information of

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age is used in many governments, private and advertising sector organization to find the culprits, employee eligible for the job, audience to be targeted for their publicity of product respectively. However, it's not that easy to find the age of a person, and there are constraints that restrict us from seeing the correct age among the set of images. Human face contains lot of information through their expressions. These expressions confuse us while finding the age, and as their expression change, the facial feature differs, resulting in either higher or low than the people's ideal age. The age estimation plays a prominent role in the applications like biometric evaluation, 3d face marking, virtual makeup, and virtual try-on applications for jewellery and eye-ware by mapping the face according to the age found. Lens kart is such an application that gives the try-on option for their customers. Age estimation is a subfield of face recognition and face tracking which in combination can predict the health of the individual. Many health care applications use this mechanism to keep track of health by monitoring their daily activities. China uses this face detection technique in service driver identification and jaywalker identification. Some other countries use it for worshipper identification and advertising etc. Finding the correct dataset for training the model is a crucial task. Since the real-time data is

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# Detection of Possible Illicit Messages Using Natural Language Processing and Computer Vision on Twitter and Linked Websites

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ABSTRACT: Human trafficking is a global problem that strips away the dignity of millions of victims. Currently, social networks are used to spread this crime through the online environment by using covert messages that serve to promote these illegal services. In this context, since law enforcement resources are limited, it is vital to automatically detect messages that may be related to this crime and could also serve as clues. In this paper, we identify Twitter messages that could promote these illegal services and exploit minors by using natural language processing. The images and the URLs found in suspicious messages were processed and classified by gender and age group, so it is possible to detect photographs of people under 14 years of age. The method that we used is as follows. First, tweets with hashtags related to minors are mined in real-time. These tweets are preprocessed to eliminate noise and misspelled words, and then the tweets are classified as suspicious or not. Moreover, geometric features of the face and torso are selected using Haar models. By applying Support Vector Machine (SVM) and Convolutional Neural Network (CNN), we are

able to recognize gender and age group, taking into account torso information and its proportional relationship with the head, or even when the face details are blurred. As a result, using the SVM model with only torso features has a higher performance than CNN.

Keywords- Support Vector Machine (SVM) and Convolutional Neural Network (CNN).

## 1. INTRODUCTION

Initially the websites were isolated and just placed for reading since the user could not truly interact with the web. However, from the innovation and arrival of web 2.0, there was a revolutionary and radical change since the user stopped being a simple spectator and became an active individual in social networks such as Facebook, Twitter, Instagram, among others. Unfortunately, a door has also been opened for illegal businesses such as human trafficking, where some countries, such as Latin American countries, have the highest rates of smuggling of people, especially children and adolescents under 14 years old. It is important to note that the average age of consent is

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# X-RAY BAGGER BASED SECURITY ON AIRPORT USING DEEP LEARNING ALGORITHM

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ABSTRACT: Luggage screening is a very important part of the airport security risk assessment and clearance process. Automating the threat objects detection from x-ray scans of passengers' luggage can speed-up and increase the efficiency of the whole security procedure. We consider the use of CNN with transfer learning for the image classification and detection problems posed with in the context of X-ray baggage security imagery. The use of the CNN approach requires large amounts of data to facilitate a complex end-to-end feature extraction and classification process. In particular, we focus on identifying harmful objects like knife, blades etc., as threat objects, being the main part of the weapon needed for deflagration. For this purpose, we use a dataset of 22k double view x-ray scans, containing a mixture of benign and threat objects. In the proposed employ deep learning techniques system we (Convolutional Neural Networks and VGG16) for the classification task. Furthermore, we validate our findings on a second dataset of double view x-ray scans. We report and critically discuss the results of the comparison on both models, showing the accuracy of our approach.

Keywords: Deep learning, Convolutional Neural Networks and VGG16.

### 1. INTRODUCTION

Security screening of X-ray baggage is majorly used to maintain security in transport, primarily in aviation and provides valuable image-based investigating operation for human admins reviewing immense, disorganized and immensely varying contents in baggage within a limited period [1]. Result of elevated consumers turnout in the universal traveling network and the increased attention on wider extension principles on national security, resulting in a challenged automated timeous classification of images task. The database images are the inputs that have been provided for checking it where it goes on to the pre-processing stage to analyze its width, height and many other features. After that, the next process that comes on to the stage is Convolutional Neural Network (CNN), where the image classification process occurs that is split up into class I and class II, where the first-class identifies the hazardous objects and the other class identifies the non-hazardous objects. For this methodology, YOLO

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## VEHICLE PATTERN RECOGNITION USING MACHINE & DEEP LEARNING TO PREDICT CAR MODEL

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ABSTRACT: There has been an increase in the application of computer vision techniques. Police departments around the world rely on various types of artificial intelligence to help them eatch criminals and avoid big traffic accidents. Although advances in vehicle recognition based on deep learning are being made, there are concerns about the current performance of the state-of-theart systems. Detection systems, for example, are bound by a wide variety of scales. Vehicle detecting experts are trying to come up with a solution. This thesis proposes a more accurate model for detecting moving vehicles. SVM, KNN, CNN, and linear regression are some of the machine learning algorithms used in this study to predict automobile models based on known inference and patterns. Among other models, CNN consistently outperforms the competition in terms of accuracy.

We'll cover SVMs, KNNs, CNNs, and linear regression in this part.

#### 1. INTRODUCTION

In the last several years, the field of intelligent transportation systems (ITS) has produced a wide range of innovative concepts and solutions. In an ITS, cars, transportation systems, and drivers all work together to achieve these goals. In order to improve public health and safety while traveling governments, corporations, and academic institutions work together to develop and implement cutting-edge ITS. To a great extent it is anticipated that developments in image processing and computer vision would have a significant impact on ITS technologies including vehicle surveillance and driver assistance systems as well as traffic control and monitoring. Identifying the manufacturer and model of a vehicle can only be done in real time

using human interpretation and license plate recognition in traditional car identification systems. The primary difference between the two approaches is that they are both vulnerable to risks and confined by a wide range of variables. With so many different automotive models and make variations, it might be tough to tell them apart. Keeping track of several displays, recording vehicle arrivals and departures, and only searching for a specific make and model is time-consuming and challenging for people. New considerations for automatic identification of such characteristics are opened when it comes to preventing excessive warnings to drivers owing to LPR failure and identifying fake number plates and unlawful vehicles, having the proper tolls in the toll collection systems, and so on. Recent interest in vehicle model and make recognition systems has resulted in an increase in efforts to improve the current system of vehicle detection and classification. Classification of vehicle makes and models, such as Vehicle Makes and Model Recognition, is essential to determining the particular type of vehicle (VMMR). However, despite these approaches' promised effectiveness, only a restricted number of car models and manufacturers are tested.

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# NLP based Machine Learning Approaches for Text Summarization

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ABSTRACT: Due to the plethora of data available today, text summarization has become very essential to gain just the right amount of information from huge texts. We see long articles in news websites, blogs, customers' review websites, and so on. This review paper presents various approaches to generate summary of huge texts. Various papers have been studied for different methods that have been used so far for text summarization. Mostly, the methods described in this paper produce Abstractive (ABS) or Extractive (EXT) summaries of text documents. Querybased summarization techniques are also discussed. The paper mostly discusses about the structured based and semantic based approaches for summarization of the text documents, Various datasets were used to test the summaries produced by these models, such as the CNN corpus, DUC2000. single and multiple text documents etc. We have studied these methods and also the tendencies, achievements, past work and future scope of them in text summarization as well as other fields.

Keywords: Abstructive (ABS) or Extractive (EXT)

#### 1. INTRODUCTION

Today's world is centralized on computers and data. Data are our intangible thoughts and imagination. We are producers and consumers of data at the same time. Every little thing in our mundane lives are either a source or receiver of data. For, example when we drive there's data involved, the speed of the car, mileage, distance traveled, etc. Since 20th century. data has been a significant part of our lives, but these days we infer more from data. We store and access them through electronic and wireless systems. Since the advent of the internet, there's an enormous amount of data available today. The Internet is a storehouse of data. Information on news, movies, education, medicine, health, nations, weather, geology, etc. is available on the internet. This could be statistical, numerical, mathematical or text data. Text data is more difficult to interpret due to larger amount of characters. Due to this gigantic amount of information, there must be a system in order to get only the essential parts of the information we access. Text summarization is a way of doing this. Text summarization has been a topic of research and study since decades. Various models have been proposed

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# IMAGE CLASSIFICATION OF THE FLOWER SPECIES IDENTIFICATION USING MACHINE LEARNING

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ABSTRACT: Image classification has become one of the key use-cases for demonstrating machine learning. The proposed work will try to classify the given input image of flower species, based on the dataset provided. And it produces an output with the classification of flower in the input image. Flower identification systems are prominently used nowadays. Although modern search engines give mechanisms for visually searching for a query image containing a flower, robustness is lacking due to the intra-class variation among millions of flowers species worldwide. Therefore, a Machine Learning method using Convolution Neural Networks is used in this proposed research work to identify highly accurate flower species. The flower image extraction function is performed using a Pre-Trained Network Extraction of Complex features. On top of that, a machine learning classifier such as Logistic Regression or Random Forest is used to produce a higher precision score. This approach helps to reduce the system requirements required to conduct a Convolution Neural Networks (CNN) to compute the intensive training task.

Keywords: Convolution Neural Networks (CNN).

### I. INTRODUCTION

Flower is a very important part of nature. Mostly we identify a plant through its flower. Experienced botanists do this identification of flower but a naive person will have to consult flower guidebooks or browse any relevant web pages on the Internet through keywords searching. Our system can recognizes the flower in real time using mobile camera. Currently this Android app can identify around 10 flowers. Most important thing is that this app can fully works in offline. We are continuously working to add more flowers to identify. Everyday we see a huge number of flower species in our house, parks, roadsides, in farms, on our rooftop but we have no knowledge of that flower species or their origin. Even we have no idea about its name. There are several guidebooks for flowers knowledge but it becomes quite difficult to find the name when have the picture. Even the Internet sometimes is not useful. But it is quite difficult for human brain to memorize all the species they see. Even some flower is similar to look at. This application recognizes the flower in real time by using mobile camera. The

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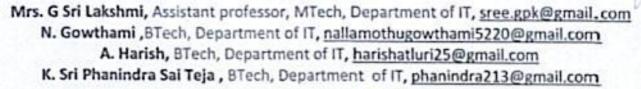


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# CROP YIELD PREDICTION USING MACHINE LEARNING ALGORITHM



ABSTRACT: Agriculture is an important sector in India. It is the major source of economy. Agriculture is first and foremost factor which is important for survival. Machine learning (ML) could be a crucial perspective for acquiring real-world and operative solution for crop yield issue. Considering the present system including manual counting, climate smart pest management and satellite imagery, the result obtained aren't really accurate. So the researchers, scientists are trying their best to predict crop in a better way. This paper focuses mainly on predicting the yield of the crop by applying various machine learning techniques. In the proposed system the machine learning models are used and It uses the previous record for training the system using some machine learning algorithms like MLP and SVR where high accuracy can be achieved. Machine learning regression approach can be used for the better prediction of crop yield and improve the performance of the crop yield prediction.

### 1. INTRODUCTION

Crop production may be a complicated development that's influenced by soil and environmental condition input parameters. Agriculture input parameters vary from field to field and farmer to farmer. Collection such info on a bigger space may be a discouraging task. However, the environmental condition info collected in Republic of India at each 1sq.m space in numerous components of the district is tabulated by Indian meteoric Department. The massive such knowledge sets may be used for predicting their influence on major crops of that individual district or place. There are completely different foretelling methodologies developed and evaluated by the researchers everywhere the globe within the field of

agriculture or associated sciences. A number of such studies are: Agricultural researchers in alternative countries have shown that tries of crop yield maximization through pro-pesticide state policies have LED to hazardously high chemical usage. These studies have reported a correlation between chemical usage and crop yield [1]. Agriculture is associate trade sector that's benefiting powerfully from the event of detector technology, knowledge science, and machine learning (ML) techniques within the latest years. These developments return to satisfy environmental and population pressures round-faced by our society, wherever reports indicate a requirement for robust international agriculture yield

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# JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)

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# CUSTOMER SEGMENTATION FOR MARKETING USING MACHINE LEARNING K-MEANS CLUSTERING ALGORITHM

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Abstract: In this present work, the objective is to segment a large group of credit card users according to similarities and usage characteristics. Customer segmentation is then used by marketing department to tailor products and services specific to these customer segments. With the help of machine learning technique one can sort out the data and can find the target group by applying several algorithms to the dataset. Without this, it will be very difficult and no better techniques are available to find the group of people with similar character and interests in a large dataset. Here, the customer segmentation using k-means clustering helps to group the data with same a ributes which exactly helps to marketing the best. We are going to use elbow method to find the number of clusters and at last we visualize the data. In this project K-means machine learning algorithm is used to form clusters of different customers. In this competitive market, it is of great significance to divide customer groups to develop customer centered products which would help them to derive successful marketing strategies and also understand what a customer wants. This helps in unravelling the hidden patterns in the data for better decision making for the future and which segment of customers to be targeted.

Keywords: Clustering, Elbow Method, K-Means algorithm, Customer Segmentation.

#### 1. INTRODUCTION

Customer Segmentation means grouping the customers based on the marketing groups which shares the similarity among customers. To be more exact, it means segmenting customers sharing the common characteristics which is the best way of marketing. Customer Segmentation is gathering information about each customer and analyzing to identify the different patterns for creating the segments. Information is collected using data which is published related to market categories. The basic information which includes the age, gender, bank balance, purchases, instalments etc., We use k-means, an unsupervised learning algorithm to divide the unlabeled dataset into k different clusters in such a way that customers belong to one cluster have similar properties. The best way of marketing is to understand and analyze what a customer wants. Segmentation of the customers would make the marketing easier by understanding precisely what a customer needs and also in reducing the time and increasing the overall sales. This is the motivation for taking up this project. I. S. Dhillon and D. M. Modha [1] reviewed about the Concept decompositions for large sparse text data using clustering, Machine Learning. T. Kanungo, D. M. Mount, N. S. Netanyahu, C. D. Piatko, R. Silverman, and A. Y. Wu [2] studied about an efficient K-means clustering algorithm. MacKay and David [3] studied about An Example Inference Task: Clustering.

Jiawei Han, Micheline Kamber, Jian Pei [4] reviewed about the Data Mining Concepts and Techniques. D. Aloise, A. Deshpande, P. Hansen, and P. Popat [5], studied about The Basis of Market Segmentation. S. Dasgupta and Y. Freund [6] studied about the Random Trees for Vector Quantization. V. Vijilesh, A. Harinl, M. Hari Dharshini, R. Priyadarshini [7] studied about the Customer segmentation using machine learning. Jaswanth-Reddy Vulchi [8] reviewed about customer segmentation using k-means clustering. Yash Kushwaha, Deepak Prajapati [9] studied about the Customer segmentation using K-means algorithm.

### 2. SYSTEM ANALYSIS:

The present work consists of two phases, in the first phase is the existing system, which stores customer data through paperwork and analyzing manually. But the digital data is increasing day by day. By analyzing the collected customer data manually, they get to know about who is beneficial to their business and increase their sales. The second phase is the process

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Concrete is a broadly utilized development material all over the planet, and its properties have been going through changes through innovative headway. Various kinds of concrete have been created to upgrade the various properties of cement. Up to this point, this improvement can be isolated into four phases. The earliest is the conventional ordinary strength substantial, which is made out of just four constituent materials, which are concrete, water, fine and coarse totals. With a quick populace development and a more appeal for lodging and framework, joined by ongoing improvements in structural designing, for example, tall structures and long-range spans, higher compressive strength concrete was required. Toward the start, decreasing the water-concrete proportion was the simplest approach to accomplish the high compressive strength. From there on, the fifth fixing, a water lessening specialist or super plasticizer was fundamental. Notwithstanding, at times the compressive strength was not generally as significant as a few different properties, like low penetrability, sturdiness and functionality. In this manner, elite execution concrete was proposed and broadly learned toward the finish of the last hundred years. As of now, elite execution concrete is utilized in gigantic volumes because of its specialized and financial benefits. Such materials are portrayed by worked on mechanical and toughness properties coming about because of the utilization of synthetic and mineral admixtures as well as particular creation processes. This invention audits the joining of mineral admixtures in twofold, ternary and quaternary mixed mortars in concrete.

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> Dr. Pramod Walke Convener

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## Convolutional 3D in Activity Recognition - A Review

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Abstract: Activity recognition in videos using deep learning has shown phenomenal progress in the last decade. The community of computer vision has been working on video data for about a decade and solved many uncertainties. Various research groups have presented many convolutional neural network architectures to solve the issues related with classification, and many more computer vision tasks. All these networks were about two dimensional image data. Recently research community of Face book introduced a network architecture called C3D network which have three dimensional convolution layers. The C3D network is performing well in activity recognition from large-scale videos, video classification tasks. This article is focused on importance of C3D network by mentioning the drawbacks of hand crafted as well as deep learning methods, architecture of C3D network, contrasts in 2D and 3D CNNs, review on different deep learning models employed for activity desection from videos and compared the performance of various anomaly detection approaches with the proposed C3D network.

Keywords: C3D network, Activity Recognition, Convolution, Video data.

#### I. INTRODUCTION

Activity recognition from videos is to permit the computer to detect the human activities automatically in real world. Analysis of behaviour and video analysis attracted attention of various fields ranging from academics to industry. The human activity recognition in videos is still a challenging task due to two different factors. Firsty, the data in the video is intelligence information with several complexities, e.g., cluttered background, variations in scale, camera motions, view point changes, and so on, Secondly, the model used to recognize the activity from video should have the capability of describing both précised (short-term) small motions and stable (long-term) temporal change of appearances.



(b) Fligh Jump and Long Aura-

Fig. 1 Example video data from UCF 101

Figure 1 clearly illustrate the above two issues. These figures are taken from UCF 101 dataset. Playing archery and piano can be recognized easily by using information from small motions between continuous frames or from static frames. But sometimes short duration clips are not having sufficient information for differentiating same classes. Second part of

the figure representing the high and long jump video data. Thus, it is necessary to exploit the complementary description of the single fixed image, long and short-term temporal evolution and also video-level representation in the activity recognition. Another important factor related with this activity recognition is that computational cost in dealing with largescale videos. Generally the computational cost is the major bottleneck for large-scale video activity recognition. From the last decade to till, a tremendous work has been progressed on video-based activity detection. The work includes, manual descriptor methods, representing activities with deep learning methods. The manual methods mainly concentrated on feature extraction. encoding. classification and discriminative powerful video descriptors. These are designed with local spatio-temporal features [1]. The problem with these descriptors is that, their computing performance is not at satisfactory level. The deep learning models utilized CNNs to have single image-level display and accomplish the temporal characteristics of videos. The problem with these deep learning models is they cannot be used for real-time scenario because of their high computational cost. To address these difficulties researchers are now taking the help of 3 dimensional convolution neural networks (C3D networks). The C3D networks are able to represent the insformation at image-level as well as video level.

### II. Architecture of C3D network

#### 2.1 Features of C3D

Generic feature extracting:

- The three dimensional convolution layers in C3D network have the ability of extracting both spatial and temporal components. Both the components are corresponding to human-object interaction, motion of objects, human-scenes, human actions, and it displays the presence or absence of the objects in the scenes.
- It makes a basic video feature representation for large videos like event detection action and localization without fine-tuning for every task.
- Not limited in representing the appearance as in AlexNet or ResNet.

#### Compact representing

- The input video segment of 16 frames in C3D model depends on dataset used after down sampling to a fixed size and the output is a 4096element vector which gives a compact representation of a video segment.
- For action recognition [2], action localization task.
   the video segments can be further fed to a



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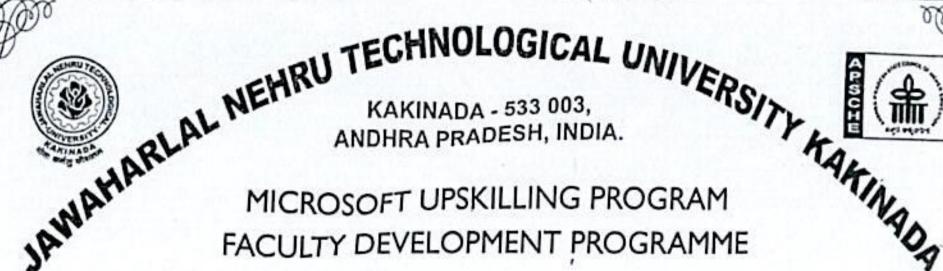
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organized by Department of CSE during 25th - 30th April, 2022.

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## Application Specific Digital and Mixed-Signal Integrated Circuit Designs Based on Algorithm Hardware Co-Design

Vishnu Priya Thotakura Department of ECE SRK Institute of Technology Vijayawada, India Lishnupriya (1811 di email.com

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Abstract - Commercial off-the-shelf semiconductor devices cannot supply system solutions provided by ASIC products. Only a few of the most obvious benefits include lower system costs, smaller volumes and weights, and improved system performance. An ASIC design solution can sometimes be used in conjunction with analogue or mised-signal designs, but doing so requires weighing various factors, such as the level of available market technology and quality vs. the investment required to set up a mixed-mode design environment and hire sufficient staff. Two mixed-signal devices have been developed using the proposed approaches, and one of those devices (e.g., ABACUS) is part of an ESPRIT project partially funded by the European Commission. Index Terms -ASIC, ESPRIT, Mixed device signal

#### I. INTRODUCTION

A variety of computing paradigms have been produced by VLS1 technology, depending on the needs of the application and the environment in which it is deployed. With the rapid growth of the Internet of Things (IoT) in the consumer electronics industry, edge computing has gained significance in recent years in addition to the conventional pursuit of large-scale and centralized computing. Local computing, like biomedical and industrial applications, demanded energy or connectivity autonomy and saw the same technology enabling.

Local and edge computing are frequently constrained by a lack of resources, the most important of which is electrical power. Many of these applications have limited processing tasks and parameters, making it inefficient and even impossible to integrate general-purpose computing devices into them [1]. Application-specific hardware, such as a bespoke circuit that exclusively executes the appropriate algorithms, should be combined in such systems. A system agnostic approach to algorithm and hardware design uses compartmentalized techniques to develop algorithms independent of hardware, and less so the reverse. Using a design process known as algorithm/hardware co-design, a wide design space can be explored simultaneously from both algorithmic and hardware viewpoints. Co-design approaches are efficiency solutions intended to solve this, with the goal of providing higher performance gains per design effort across many design stacks. There are functional and non-functional standards for algorithm/hardware co-design. An algorithm's executability in hardware is all that the functional

specification specifies. There is a lot of design space with this problem. There are no functionalities listed in the non-functionality standard section. Non-functionality spec compliance is the primary focus of the co-design process.

Algorithm/hardware co-design, at its most basic level, is the optimization of an algorithm model that reflects the architectural behaviour of hardware and systems, with the inclusion of scheduling, data traffic models and linkages between algorithm stack operators and processing elements (PEs) in the hardware stack.

Constraint allocation and partitioning is the optimization technique employed in the projects showcased here. Here's how it works: Then model the algorithm operators with the associated PE cost in the constraint domain, and experiment with applicable hardware techniques to allow re-allocation of the constraint domain budget, which in turn allows for further modifications to PE/operator, scheduling, and architecture. Do this iteratively until the design is optimized, and then stop [2].

ASICs, or Application-Specific Integrated Circuits, are custom-built integrated circuits created for a particular purpose. If an ASIC is being designed for a large-scale production, it may contain a significant portion of all of the electronic components needed on a single integrated circuit. It's easy to see why ASIC designs are only used in high-volume products due to their exorbitant price tag.

Although ASIC designs are expensive, they can be very cost-effective in many applications with enormous volumes. Because an ASIC is customizable to match a particular product's needs, fewer components are needed because an ASIC contains most of the entire design on a single integrated circuit [3]. This means that they're frequently seen in high-volume products like cell phones or other comparable ones, whether they're for consumers or businesses.

Logic functions were the sole ones handled by the early ASICs, which were general-purpose. Analogue (including RF) and logic functions can now coexist in the same mixed signal ASIC architecture. A complete system on a chip, or SoC, can be built using these mixed signal ASICs. A whole system or product can be built entirely on a single chip, eliminating the need for any further components. As a result, many applications find a mixed signal ASIC architecture to be an appealing option [4].

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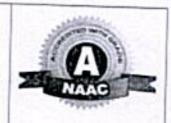
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Vol. 39, No. 2, April, 2022, pp. 717-722

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## Deep Residual CNN with Contrast Limited Adaptive Histogram Equalization for Weed Detection in Soybean Crops



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CLAHE, classification, CNN, data augmentation, deep residual weed and crop

#### **ABSTRACT**

Weeding is the fundamental task in agriculture to increase yields crop. Accurate weed recognition is major prerequisite in precision agriculture. Precision weeding significant reduces the usage of herbicides in farming. Deep learning has been a major endeavor for enhancing the learning performance, particularly for classification. This paper proposes a Deep Residual Convolutional neural network (DRCNN) with Contrast Limited Adaptive Histogram Equalization (CLAHE) for weed and crop classification helpful for accurate individual targeting of weeds. In this method, initially data augmentation is performed to avoid overfitting on training data, A deeper residual network architecture is defined through residual connections in CNN architecture this architecture improves gradient flow through the network and for training the deeper network. The experiments are carried out on the publicly available dataset with four groups of images viz., soil, grass, soybean and broadleaf. Different state-of-the-art pretrained networks like AlexNet, and VGG-16 Net are also investigated and the results are compared. The proposed method yielded an accuracy of 97.3% which is superior to other methods.

#### 1. INTRODUCTION

Crop production is the major objective of agriculture. For global food management it is very essential. Crop is a cultivated plant while weed is an unwanted plant which grows randomly in the field. Weed control is very vital in crop production. Precision weed control is a challenging task to get quality crops, and can reduce the amount of herbicides to ensure the best results. This is possible with the use of latest techniques based on artificial intelligence. Different machine learning and deep learning algorithms are used recently in precision agriculture. There can be many varieties of weed that are harmful for crop production and need to be detected in the early stages of growth. The basic resources which are essential for crop growth viz., soil, water, sunlight and also the fertilizers used are effected by these unwanted weeds. From the literature it is observed that about one third of crops are effected due to growth of weeds. Weed and crop classification is fundamental in agriculture, rural medicine, forestry and commercial applications. In the past, weed detection and removal was done by men, later some research work was done and implemented on weed-crop classification for automatic detection and removal. subsequently robots came into existence, but suffer accuracy problem existing with traditional classification techniques. So we propose a deep learning method to perform weed/crop classification.

#### 2. RELATED WORK

Weed and crop recognition is a challenging research area and various computer vision algorithms are developed

focusing this area. The fundamental approaches are feature based and recently different machine learning and deep learning algorithms are developed aiming at recognizing weeds accurately. Contrast-Limited-Adaptive-Histogram-Equalization (CLAHE) is widely used image enhancement method. The following subsections outlines the related work of the preprocessing method, Feature based and Deep learning based approaches.

#### 2.1 Feature-based approaches

Earlier, weed and crop identification methods are based on low level feature extraction like color, texture and shape. In research Shape, texture and fractal dimensions are integrated for weed recognition. In their work Support vector machine and Shafer-Dempster evidence theory are used [1]. In maize and weed classification Color indices is used. Here Support Vector Data Description (SVDD) is also used and investigated under different weather conditions [2]. In precision farming weed control task is vital. To achieve this SURF features integrated with an optimized Gaussian Mixture Model is employed [3]. Plant and weed classification in UAV imagery is done for smart farming [4]. In addition, multi spectral features are used in weed recognition [5]. The features mentioned used for recognition are taken on human experience. The recognition performance is different on different datasets [6].

#### 2.2 Deep learning based approaches

With feature based methods, different machine learning techniques are used for classification purpose. Recently these

