A project report on

CUSTOMER PERSONA SEGMENTATION USING MACHINE LEARNING

Submitted in partial fulfilment of the requirements for award of the degree of

BACHELOR OF TECHNOLOGY

In

COMPUTER SCIENCE -AIML&DS
By

A. Akhila

(20U41U4405)

G. Sravanthi

(20U41A4425)

A. Jai Ram

(20U41A4435)

A. Ashrit

(20U41A4436)

Under the Esteemed guidance of

Mr. A. Venkateshwara Rao

Associate Professor, Department of CSE AIML&DS

Build New World

Diet

DEPARTMENT OF COMPUTER SCIENCE-AIML&DS

DADI INSTITUTE OF ENGINEERING & TECHNOLOGY
(AN AUTONOMOUS INSTITUTE)

I

CERTIFICATE

This is to certify that the project report entitled **"Customer Persona Segmentation"** submitted by A. Akhila(20U41A4405), G. Sravanthi (20U41A4425), A. JaiRam (20U41A4436), A. Ashrit (20U41A4436), in partial fulfillment of the requirements for the award of the Degree of **Bachelor of Technology in Computer Science-AIML&DS**, from Dadi Institute of Engineering & Technology(A), Anakapalle affiliated to JNTUGV, accredited by NAAC with 'A' grade, is a record of bona fide work carried out by them under my guidance and supervision.

02/05/24

PROJECT GUIDE
(Associate Professor)

HEAD OF THE DEPARTMENT

Head of the Department
Computer Science & Engg
Dadi Institute of Engg. & Tech
Anakapalle-531002

EXTERNAL EXAMINER

ABSTRACT

Customer segmentation is a crucial aspect of marketing strategies, aiming to divide a heterogeneous customer base into distinct groups with similar characteristics and needs. This abstract will explore various methodologies used in customer segmentation, including demographic, psychographic, behavioural, and geographic approaches. Additionally, it will discuss the importance of segmentation in tailoring marketing strategies, enhancing customer satisfaction, and ultimately improving business performance.

A stylish woman influencer, who always do the online shopping 12 hours a Day, in the online shopping websites like Amazon, Flipkart, Myntra and etc. as she, filters the category of her own styling to look more attractive and beautiful. For the overnights, she faces problem of filtering every product but which was in the trend the product will be out of stock in the market. So, we made to conclude that the markets in various industries shouldn't Make the product out of stock or overflow. Analyse the industry and provide enhanced accuracy for improving the strategies of market which increase profits.

KEYWORDS:

Machine Learning, K- means Algorithm, Python, RFM, Regressions, Web Development, Stream Lit.

A project report on

ADVANCEMENTS IN INTRUSTION DETECTION SYSTEM

Submitted in partial fulfillment of the requirements for award of the degree of

BACHELOR OF TECHNOLOGY

In

COMPUTER SCIENCE ENGINEERING - DATA SCIENCE

By

G. KRISHNA KIRITI

(21U45A4404)

P. BALAJI	G. K. DEVI	K. ARAVIND
(21U45A4401)	(20U41A4417)	(21U45A4403)

Under the Esteemed guidance of

Mrs P. MOUNIKA

Assistant Professor, Department of CSD & CSM

Build New World

Diet

DEPARTMENT OF COMPUTER SCIENCE ENGINEERING – DS & AI/ML

DADI INSTITUTE OF ENGINEERING & TECHNOLOGY

(AN AUTONOMOUS INSTITUTE)

(Approved by A.I.C.T.E., New Delhi & Permanently Affiliated to JNTU GV)

Accredited by NAAC with 'A' Grade and Inclusion u/s 2(f) & 12(B) of UGC Act

An ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified Institute.

NH-16, Anakapalle – 531002, Visakhapatnam, A.P.

(2020-2024)

i

CERTIFICATE

This is to certify that the project report entitled "Advancements in Intrusion Detection Systems" submitted by G KRISHNA KIRITI (21U45A4404), P BALAJI (21U45A4401), G K DEVI(20U41A4417),K ARAVIND (21U45A4403). In partial fulfilment of the requirements for award of the Degree of Bachelor of Technology in Department of COMPUTER SCIENCE AND ENGINEERING Specialization in DATA SCIENCE, from Dadi Institute of Engineering & Technology(A), Anakapalle affiliated to JNTUGV, accredited by NAAC with 'A' grade is a record of bonafide work carried out by them under my guidance and supervision.

03/05/24

Mrs P.MOUNIKA
(ASSISTANT PROFESSOR)
(PROJECT GUIDE)

Mr A. VENKATESWARA RAO
(ASSOCIATE PROFESSOR)
(HEAD OF THE DEPARTMENT)

Head of the Department
Computer Science & Engg
Dadi Institute of Engg & Tech
Anakapalle-531002

EXTERNAL EXAMINER

ABSTRACT

Machine learning techniques are being widely used to develop an intrusion detection system (IDS) for detecting and classifying cyberattacks at the network-level and the host-level in a timely and automatic manner. However, many challenges arise since malicious attacks are continually changing and are occurring in very large volumes requiring a scalable solution. There are different malware datasets available publicly for further research by cyber security community. However, no existing study has shown the detailed analysis of the performance of various machine learning algorithms on various publicly available datasets. Due to the dynamic nature of malware with continuously changing attacking methods, the malware datasets available publicly are to be updated systematically and benchmarked.

This project evaluates the performance of various classical algorithms such as SVM, Random Forest and Deep Neural Network (DNN) etc to detect attacks on network using KDD, NSL datasets. The existing classical algorithms (SVM, Random Forest) unable to predict dynamic (if attacker introduce new attacks with changes in attack parameter) attacks and needs to be trained in advance. The DNN is a famous algorithm which has high predicting ratio in all fields such as image processing, data classification etc. Therefore, DNN model is capable of detecting such attacks and to overcome from these attacking problems with dynamic attack signatures. The proposed DNN model contains the multiple number of layers. The DNN algorithm keep filtering training algorithm with hidden layer to form most accurate model to predict testing class. The common classes are Normal, Remote to user (R2L), Denial-of-Service (DOS), User to Root (U2R), Probe but in dataset we have other names, but all those names come under these classes.

Keywords: Intrusion Detection System, Machine Learning, Cyberattacks, SVM, Random Forest, Deep Neural Network, KDD dataset, NSL dataset, Remote to user (R2L), Denial-of-Service (DOS), User to Root (U2R).

IDENTIFYING SUSPICIOUS TRANSACTION IN FINANCIAL DATA USING MACHINE LEARNING

A Project Report submitted in partial fulfilment of the requirements for the award of the Degree of

BACHELOR OF TECHNOLOGY

IN

COMPUTER SCIENCE AND ENGINEERING with Specialization DATA SCIENCE

Submitted by

D. Divya Lakshmi	A. Teja Vara Prasad	A. Navya Sri
(20U41A4406)	(20U41A4442)	(20U41A4412)

Under the Esteemed guidance of

Mrs. CH. USHA

Assistant Professor,

Department of CSD & CSM

DADI INSTITUTE OF ENGINGINEERING TECHNOLOGY

(AN AUTONOMOUS INSTITUTE)

CERTIFICATE

This is to certify that the project report entitled **"IDENTIFYING SUSPICIOUS TRANSACTION IN FINANCIAL DATA USING MACHINE LEARNING"** is being submitted by D. DIVYA LAKSHMI (20U41A4406), A. TEJA VARA PRASAD (20U41A4442), A.NAVYA SRI (20U41A4412). In partial fulfilment of the requirements for award of the Degree of Bachelor of Technology in **COMPUTER SCIENCE AND ENGINEERING with Specialization DATA SCIENCE**, Dadi Institute of Engineering & Technology(A), Anakapalle affiliated to JNTUGV, accredited by NAAC with 'A' grade is a record of bonafide work carried out by them under my guidance and supervision.

2/5/24

(ASSISTANT PROFESSOR)
(PROJECT GUIDE)

(ASSOCIATE PROFESSOR)
(HEAD OF THE DEPARTMENT)

Head of the Department
Computer Science & Engg
Dadi Institute of Engg. & Tech
Anakapalle-531002

EXTERNAL EXAMINER

II

ABSTRACT

In financial systems, the detection of anomalous or suspicious activities is paramount to maintaining integrity, security, and trust. Traditional rule-based methods often struggle to keep pace with the evolving sophistication of fraudulent activities. In response, machine learning techniques have emerged as powerful tools for detecting such anomalies in financial data. This project explores the effectiveness of two prominent machine learning algorithms, Isolation Forest and One-Class Support Vector Machine (SVM), in identifying suspicious activities within financial datasets. Isolation Forest is known for its ability to isolate anomalies efficiently, while One-Class SVM excels in capturing outliers in high-dimensional spaces. Through rigorous experimentation and evaluation, this study analyses the performance of both algorithms across various financial datasets. Metrics such as accuracy, precision, recall, and F1 score are employed to assess the effectiveness of anomaly detection. Additionally, the computational efficiency and scalability of each method are also considered. The findings of this research offer valuable insights into the strengths and limitations of Isolation Forest and One-Class SVM in detecting suspicious activities in financial data. Furthermore, the comparative analysis provides guidance for practitioners and researchers in selecting the most suitable algorithm based on specific requirements and characteristics of the dataset. Implement using Exploratory Data Analysis (EDA) and Machine Learning algorithms data. Using Tableau or Power BI tools to visualize the data.

A project report on

Emotional Mood Enhancer

Submitted in partial fulfilment of the requirements for award of the degree of

BACHELOR OF TECHNOLOGY

In

COMPUTER SCIENCE AND ENGINEERING-DATA SCIENCE

By

P.D.L.Sreya

(20U41A4401)

K.Bilwa Shankaran   N.Balaji   G.Shanmukha Naidu

(20U41A4433)   (20U41A4418)   (20U41A4427)

Under the Esteemed guidance of

Mrs.M.KALYANI

Assistant Professor, Department of CSD&CSM

DEPARTMENT OF COMPUTER SCIENCE-CSD&CSM

DADI INSTITUTE OF ENGINEERING & TECHNOLOGY
(AN AUTONOMOUS INSTITUTE)

(Approved by A.I.C.T.E., New Delhi & Permanently Affiliated to JNTU GV)
Accredited by NAAC with 'A' Grade and Inclusion u/s 2(f) & 12(B) of UGC Act
An ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified Institute.
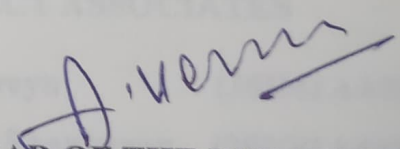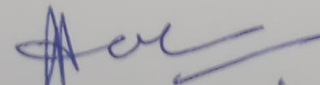NH-16, Anakapalle – 531002, Visakhapatnam, A.P.
(2020-2024)

DEPARTMENT OF

CSD&CSM

CERTIFICATE

This is to certify that the project report entitled **"Emotional Mood Enhancer"** submitted by P.D.L.Sreya (20U41A4401), K.BilwaShankaran (20U41A4433), N.Balaji (20U41A4418), G.Shanmukha Naidu (20U41A4427), in partial fulfillment of the requirements for the award of the Degree of **Bachelor of Technology in Computer Science-Data Science**, from Dadi Institute of Engineering & Technology(A), Anakapalle affiliated to JNTUGV, accredited by NAAC with 'A' grade, is a record of bona fide work carried out by them under my guidance and supervision.

M.Kalyani
09/05/24
PROJECT GUIDE

HEAD OF THE DEPARTMENT
Head of the Department
Computer Science & Engg
Dadi Institute of Engg. & Tech
Anakapalle-531002

EXTERNAL EXAMINER

ABSTRACT

The increasingly rapid pace of life has apparently made it difficult for an individual to find emotionally stable relationships that led to modern mental illnesses such as schizophrenia, depression, anxiety and solitude disorders etc. As a solution for this mechanical lifestyle we have been gradually adapting to, our project helps the person to have emotional support and provide companionship by analyzing the voice modulation and expression of speech for better understanding and confinement of emotions. The foundation of our project lies in the extensive collection of emotional data encompassing speech patterns, and textual cues. This rich dataset is used to train a deep neural network, employing state-of-the-art algorithms such as Multi Layer Perceptron(MLPs) and transformer models, to comprehensively understand the nuances of human emotions and give personalized interventions using Pre-trained Transformer.

Keywords: Emotion recognition, personalized interventions, interactive sessions, supervised learning techniques, pre-trained Transformer.

A project report on

PNEUMONIA DETECTION USING DEEP LEARNING TECHNIQUES

Submitted in partial fulfillment of the requirements for award of the degree of

BACHELOR OF TECHNOLOGY

In

COMPUTER SCIENCE ENGINEERING - DATA SCIENCE

By

D. SRI HARI SAI KUMAR

(20U41A4410)

S. UDAY KIRAN	**E. RAMU**	**P. SAI KUMAR**
(20U41A4407)	**(20U41A4416)**	**(20U41A4429)**

Under the Esteemed guidance of

Mrs G. CHANDRIKA

Assistant Professor, Department of CSD & CSM

DEPARTMENT OF COMPUTER SCIENCE ENGINEERING – DS & AI/ML

DADI INSTITUTE OF ENGINEERING & TECHNOLOGY
(AN AUTONOMOUS INSTITUTE)

(Approved by A.I.C.T.E., New Delhi & Permanently Affiliated to JNTU GV)
Accredited by NAAC with 'A' Grade and Inclusion u/s 2(f) & 12(B) of UGC Act
An ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified Institute.
NH-16, Anakapalle – 531002, Visakhapatnam, A.P.
(2020-2024)

DEPARTMENT OF
COMPUTER SCIENCE ENGINEERING – DATA SCIENCE & ARTIFICIAL INTELLIGENCE, MACHINE LEARNING

CERTIFICATE

This is to certify that the project report entitled **"Pneumonia detection using deep learning techniques"** submitted by D. Sri hari sai kumar (20U41A4410), S. Uday kiran (20U41A4407), E. Ramu (20U41A4416), P. Sai kumar (20U41A4429). In partial fulfilment of the requirements for award of the Degree of **Bachelor of Technology in Computer Science Engineering – Data Science**, from Dadi Institute of Engineering & Technology(A), Anakapalle affiliated to JNTUGV, accredited by NAAC with 'A' grade is a record of bonafide work carried out by them under my guidance and supervision.

Mrs G. CHANDRKA
(ASSISTANT PROFESSOR)
(PROJECT GUIDE)

Mr A. VENKATESWARA RAO
(ASSOCIATE PROFESSOR)
(HEAD OFTHEDEPARTMENT)

Head of the Department
Computer Science & Engg
Dadi Institute of Engg. & Tech
Anakapalle-531002

EXTERNAL EXAMINER

II

ABSTRACT

Pneumonia, a common and possibly fatal respiratory infection, frequently necessitates an early and correct diagnosis in order to be treated effectively. In order to enable quick and accurate diagnosis of pneumonia, we are using deep learning models in this research that have been trained on chest X-ray images. Two different models were created and trained with a dataset of chest X-ray images: ResNet50, a custom Convolutional Neural Network (CNN). The models' remarkable accuracy of 98%, 88%, respectively, showed how well they could differentiate between photos with pneumonia and those without it.

Furthermore, we used the Flask framework to deploy these models as a web application, making this technology easily accessible and user-friendly. The resulting website has a simple interface through which people may upload the chest X-ray photos. Once the photo is submitted, the deep learning models that have been implemented quickly analyse them and make predictions about whether the images show pneumonia or normal. This implementation provides a useful tool for healthcare providers to help diagnose pneumonia in addition to demonstrating the potential of deep learning in medical diagnostics.

Keywords: Pneumonia detection, Deep learning, Chest X-ray images, ResNet50, Convolutional Neural Network (CNN), Flask framework, Web application.

A project report on

HEART ATTACK RISK PREDICTION USING RETINAL FUNDUS IMAGES WITH DEEPLEARNING

Submitted in partial fulfilment of the requirements for award of the degree of

BACHELOR OF TECHNOLOGY

In

CSE(AI ML)& DATASCIENCE

By

Amrutha Maroju
(20U41A4420)

GK Krishna Vamsi   **V. Sri Hari Vittal**   **S. Mohan Vamsi**
(20U41A4422)   **(21U45A4405)**   **(20U41A44237)**

Under the Esteemed guidance of

Kalyani Malla

Assistant professor, Department of CSE (AI ML) &DS

Build New World

Diet

DEPARTMENT OF CSE (AI ML) &DS

DADI INSTITUTE OF ENGINEERING & TECHNOLOGY
(AN AUTONOMOUS INSTITUTE)

(Approved by A.I.C.T.E., New Delhi & Permanently Affiliated to JNTU GV)
Accredited by NAAC with 'A' Grade and Inclusion u/s 2(f) & 12(B) of UGC Act
An ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified Institute.
NH-16, Anakapalle – 531002, Visakhapatnam, A.P.
(2020-2024)

DEPARTMENT OF

CSE (AI ML)& Data Science

CERTIFICATE

This is to certify that the project report entitled **"Heart Attack Risk Prediction Using Retinal fundus Images With Deep Learning"** submitted by Amrutha Maroju (20U41A4420), GK.KrishnaVamsi(20U41A4422),V.SriHari.Vittal(21U45A4405),S.MohanVamsi(20U41A4435) In partial fulfilment of the requirements for award of the Degree of **Bachelor of Technology** in **CSE(AI ML)&DS**, from Dadi Institute of Engineering & Technology(A), Anakapalle affiliated to JNTUGV, accredited by NAAC with 'A' grade is a record of Bonafide work carried out by them under my guidance and supervision.

M. Kalyani 03/05/24

Mrs.Kalyani Malla
Asst.Professor

PROJECT GUIDE

Mr. A Venkatesh
Associate Professor
HEAD OF THE DEPARTMENT

EXTERNAL EXAMINER

ABSTRACT

The two main risk factors for cardiovascular disease, hypertension and heart attacks, have a substantial impact on the development and function of the microvascular system. Retinal fundus images can be utilized to identify abnormalities in the retinal blood vessels that reflect the degree of blood vessel damage caused by heart attacks and hypertension. identifying the preclinical symptoms that are below an observer's threshold with deep learning tools. The purpose of the suggested methodology was to investigate how the morphological features of retinal blood vessels are affected by heart attacks and hypertension. When hypertension and a heart attack are diagnosed, retinal images are gathered by data scientists. Using the vascular segmentation method, interference data—information about structures other than the retinal vasculature—is eliminated, leaving just morphological characteristics. The method aims to create a system for visual image-based heart disease detection, especially in young people, to identify heart disease. In the study, a dataset of retinal imaging is used, and retinal vessel segmentation is used to separate the vessels in the images. In several specialties, such as laryngology, neurosurgery, and ophthalmology, the analysis of blood vessels is crucial for diagnosis, therapy planning and execution, and assessment of clinical outcomes. Therefore, vessel segmentation is a crucial method for using the retinal image to detect heart disease. Changes in the eyes may be a sign of many conditions.

Keywords: Retinal Fundus Images, Deep Learning, Heart Attacks, Vascular Segmentation.

FRAUD DETECTION IN ONLINE TRANSACTIONS
USING MACHINE LEARNING

A Project Report submitted in partial fulfilment of the requirements for the award of the Degree of

BACHELOR OF TECHNOLOGY

IN

COMPUTER SCIENCE AND ENGINEERING

with Specialization DATA SCIENCE

Submitted by

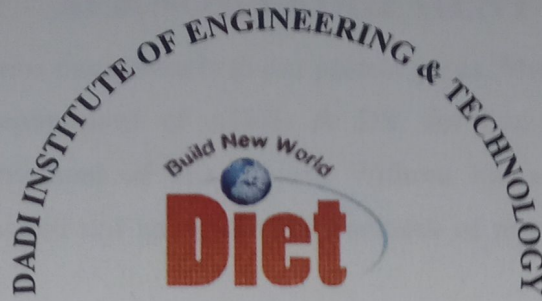|	
URIKITI YERRAJI PAVAN	20U41A4411
B. BHANU PRAKASH	20U41A4402
PALLA SASIDHAR	20U41A4426
K. V. SAI CHARAN	20U41A4441

Under the Esteemed guidance of

Mrs. P. MOUNIKA

Assistant Professor, Department of CSM & CSD

Build New World

Diet

DADI INSTITUTE OF ENGINEERING & TECHNOLOGY
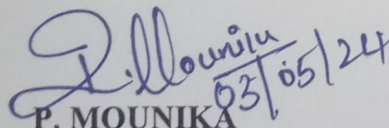### (AN AUTONOMOUS INSTITUTE)

(Approved by A.I.C.T.E., New Delhi & Permanently Affiliated to JNTU GV)
Accredited by NAAC with 'A' Grade and Inclusion u/s 2(f) & 12(B) of UGC Act
An ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified Institute.
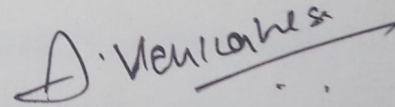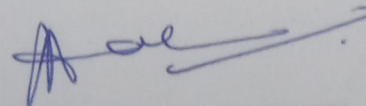NH-16, Anakapalle – 531002, Visakhapatnam, A.P.
(2020-2024)

I

DEPARTMENT OF

COMPUTER SCIENCE AND ENGINEERING

with Specialization DATA SCIENCE

CERTIFICATE

This is to certify that the project report entitled **"Fraud Detection in Online Transactions"** submitted by U.YERRAJI PAVAN (20U41A4411), B.BHANU PRAKASH (20U41A4402), P.SASIDHAR (20U41A4426), K.V.SAI CHARAN (20U41A4441). In partial fulfilment of the requirements for award of the Degree of Bachelor of Technology in **Department of AIML&DS**, from Dadi Institute of Engineering & Technology(A), Anakapalle affiliated to JNTUGV, accredited by NAAC with 'A' grade is a record of bonafide work carried out by them under my guidance and supervision.

03/05/24

P. MOUNIKA
(ASSISTANT PROFESSOR)
(PROJECT GUIDE)

A.VENKATESWARA RAO
(ASSOCIATE PROFESSOR)
(HEAD OF THE DEPARTMENT)

Head of the Department
Computer Science & Engg
Dadi Institute of Engg. & Tech
Anakapalle-531002

EXTERNAL EXAMINER

II

ABSTRACT

As we approach the era of modernity, the prevalence of online payments are markedly increasing. Opting to pay online proves significantly advantageous for the consumer in emergency situations and eliminating the inconvenience of carrying physical currency. Moreover, the inclination to abstain from holding cash is becoming more pronounced. Nevertheless, it is imperative to acknowledge that "Positive developments often coexist with challenges".

The adoption of online transaction methods has given rise to the potential for fraudulent activities, which can manifest in the utilization of various payment applications. Consequently, the implementation of robust online transaction fraud detection mechanisms becomes paramount. The primary objective revolves around the identification of such fraudulent activities, encompassing factors such as the scrutiny of publicly available data and the evolving nature of fraudulent patterns.

Keywords:- Machine Learning, Anomaly Detection, Classification, Supervised Learning, LogisticRegression, SupportVectorClassifier, KNNClassifier, DecisionTree, RandomForest.

A project report on

AUTOMATIC IMAGE CAPTIONING USING DEEP LEARNING

Submitted in partial fulfilment of the requirements for award of the degree of

BACHELOR OF TECHNOLOGY

In

COMPUTER SCIENCE AND ENGINEERING - DATA SCIENCE

By

A.T.V. Sai Sony
(20U41A4409)

N. Sailaja
(20U41A4421)

B. Roshini
(20U41A4415)

K. Prasad
(21U45A4407)

Under the Esteemed guidance of

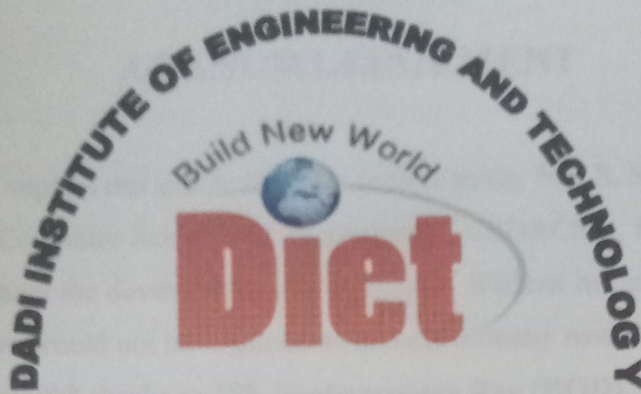## Mr. S. Syam Kumar
Assistant Professor, CSD&CSM.

DEPARTMENT OF COMPUTER SCIENCE ENGINEERING – AIML&DS

DADI INSTITUTE OF ENGINEERING & TECHNOLOGY
(AN AUTONOMOUS INSTITUTE)
(Approved by A.I.C.T.E., New Delhi & Permanently Affiliated to JNTU GV)
Accredited by NAAC with 'A' Grade and Inclusion u/s 2(f) & 12(B) of UGC Act
An ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified Institute.
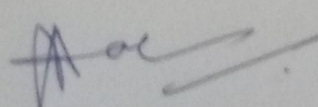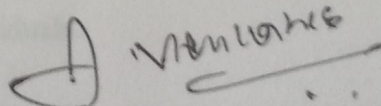**NH-16, Anakapalle–531002, Visakhapatnam, A.P.**
(2020-2024)

I

DADI INSTITUTE OF ENGINEERING AND TECHNOLOGY

Build New World

Diet

DEPARTMENT OF

COMPUTER SCIENCE AND ENGINEERING – CSD&CSM

CERTIFICATE

This is to certify that the project report entitled **"AUTOMATIC IMAGE CAPTIONING USING DEEP LEANING"** submitted by A.T.V.SAI SONY (20U41A4421), N. SAILAJA (20U41A4421), B. ROSHINI (20U41A4415), P. PRASAD (21U45A4407). In partial fulfilment of the requirements for award of the Degree of **Bachelor of Technology** in **Computer Science and Data Science Engineering**, from Dadi Institute of Engineering & Technology(A), Anakapalle affiliated to JNTUGV, accredited by NAAC with 'A' grade is a record of bonafide work carried out by them under my guidance and supervision.

88b 03/05/24.

PROJECT GUIDE

HEAD OF THE DEPARTMENT

Head of the Department
Computer Science & Engg
Dadi Institute of Engg. & Tech
Anakapalle-531002

EXTERNAL EXAMINER

ABSTRACT

Now a days image captioning is one of the recent and growing research problem. Day by day various solutions are being introduced for solving the problem. Even though, many solutions are already available, a lot of attention is still required for getting better and precise results. So, we came up with the idea of developing a image captioning model using different combinations of Convolutional Neural Network architecture along with Long Short Term Memory in order to get better results. We have used three combinations of CNN and LSTM for developing the model. The proposed model is trained with three Convolutional Neural Network architecture such as Inception-v3, Xception, ResNet50 for feature extraction from the image and Long Short-Term Memory for generating the relevant captions. Among the three combinations of CNN and LSTM, the best combination is selected based on the accuracy of the model. The model is trained using the Flickr 8K dataset.

KEYWORDS: Generate captions, deep learning techniques, concepts of image captioning.

DEEP FAKE FACE IMAGE DETECTION USING DEEP LEARNING

A project report on Submitted in partial fulfilment of the requirements for award of the degree of

BACHELOR OF TECHNOLOGY

IN

COMPUTER SCIENCE AND ENGINEERING-DATASCIENCE

Submitted By

K. ANJANI SAI PARVATHI	20U41A4403
K. SAHITHI	20U41A4443
V. SRI VYSHNAVI	20U41A4413
B. SAI SARATH	20U41A4423

Under the Esteemed guidance of

Mrs. K. DIVYA KALYANI

Assistant Professor, Department of CSD &CSM

Build New World

Diet

DADI INSTITUTE OF ENGINEERING & TECHNOLOGY
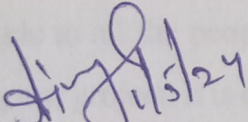
(AN AUTONOMOUS INSTITUTE)

DADI INSTITUTE OF ENGINEERING & TECHNOLOGY
(AN AUTONOMOUS INSTITUTE)

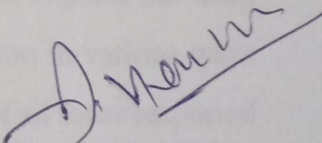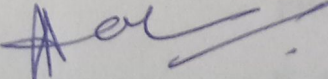## DEPARTMENT OF

COMPUTER SCIENCE AND ENGINEERING-CSD & CSM

<u>CERTIFICATE</u>

This is to certify that the project report entitled "DEEP FAKE FACE IMAGE DETECTION USING "DEEP LEARNING" submitted by K. Anjani Sai Parvathi(20U41A4403),K.Sahithi(20U41A4443),V.SriVyshnavi(20U41A4413), B. Sai Sarath(20U41A4423). In partial fulfilment of the requirements for award of the Degree of Bachelor of Technology in Computer Science and Engineering-Data Science, from Dadi Institute of Engineering & Technology(A), Anakapalle affiliated to JNTUGV, accredited by NAAC with 'A' grade is a record of Bonafide work carried out by them under my guidance and supervision.

PROJECT GUIDE

HEAD OF THE DEPARTMENT

Head of the Department
Computer Science & Engg
Dadi Institute of Engg. & Tech
Anakapalle-531002

EXTERNAL EXAMINER

ABSTRACT

Lately, an AI-based free programming device has made it simple to make trustworthy face trades in images that leave not many hints of control, in what is known as "deepfake" images. In this project we are designing LBP Based deep 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 using TKINTER GUI, then that test image will be applied on training model to detect whether test image contains fake image or non-fake image. Below we can see some details on LBP.

Keywords: Deep Fake, Convolutional Neural Network, LBP (Local Binary Pattern)

A project report on

FLIGHT PRICE PREDICTION USING MACHINE LEARNING

Submitted in partial fulfilment of the requirements for award of the degree of

BACHELOR OF TECHNOLOGY

In

COMPUTER SCIENCE & ENGINEERING SPECIALIZATION IN DATASCIENCE

By

Surisetty Poornasree

(20U41A4408)

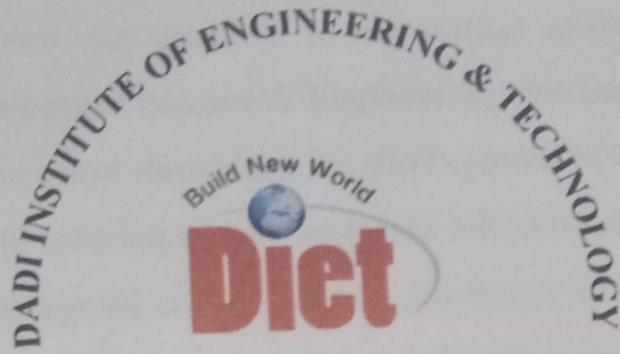|		
Pondri SuryaSiva	**Mamidi Chandana**	**Senapathi Nagalakshmi**
(20U41A4404)	**(20U41A4439)**	**(21U45A4402)**

Under the Esteemed guidance of

Mr.S.Syam Kumar

Asst.professor , Department of Computer Science & Engineering specialization in Data Science

DEPARTMENT OF COMPUTER SCIENCE WITH DATA SCIENCE

DADI INSTITUTE OF ENGINEERING & TECHNOLOGY

(AN AUTONOMOUS INSTITUTE)

(Approved by A.I.C.T.E., New Delhi & Permanently Affiliated to JNTU GV)
Accredited by NAAC with 'A' Grade and Inclusion u/s 2(f) & 12(B) of UGC AcAn ISO
9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified Institute.NH-16, Anakapalle – 531002,
Visakhapatnam, A.P. **(2020-2024)**

1

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING SPECIALIZATION IN DATA SCIENCE
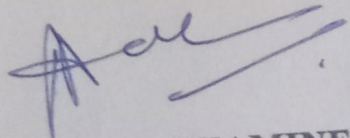
CERTIFICATE

This is to certify that the project report entitled **"Flight Price Prediction using Machine Learning"** submitted by Surisetty Poornasree(20U41A4408),Pondri SuryaSiva (20U41A4404),Mamidi Chandana (20U41A4439),Senapathi NagaLakshmi (21U45A4402). In partial fulfilment of the requirements for award of the Degree of **Bachelor of Technology** in **Computer Science & Engineering Specializtion in Datascience**, from Dadi Institute of Engineering & Technology(A), Anakapalle affiliated to JNTUGV, accredited by NAAC with 'A' grade is a record of bonafide work carried out by them under my guidance and supervision.

Mr.S.SyamKumar 03/05/24

Asst.Professor

PROJECT GUIDE

Mr.A.Venkateswara Rao

Associate Professor

HEAD OF THE DEPARTMENT

EXTERNAL EXAMINER

ABSTRACT

Flight price prediction is a critical task in the travel industry. This project explores the use of machine learning algorithms such as RandomForestRegressor, RandomSearchCV, and ExtraTreeRegressor to predict flight prices accurately.This project involves developing algorithms that can accurately forecast the cost of airline tickets based on historical data and relevant features.RandomForestRegressor and ExtraTreeRegressor are ensemble learning methods known for their robustness and accuracy in regression tasks. RandomSearchCV is employed for hyper parameter tuning to optimize model performance. The study aims, to develop a reliable model that can predict flight prices based on relevant features such as departure time, arrival time ,destination, source ,stops and airline.The feature selection, model training, and evaluation was done using historical flight data. The approach demonstrates promising results in improving the accuracy of flight price predictions, benefiting both travelers and airlines.

"Airfare Predictor":Predicts the fee should paid by a passenger for air transport.

Keywords : RandomForestRegressor , RandomSearchCV , ExtraTreeRegressor , Regression analysis , Hyper parameter tuning

A Project report on

DIGITALIZED VOTING SYSTEM USING BLOCKCHAIN TECHNOLOGY

Submitted in partial fulfillment of the requirements for award of the degree of

BACHELOR OF TECHNOLOGY

In

COMPUTER SCIENCE ENGINEERING - DATA SCIENCE

By
Sayeeda Fathima
(20U41A4431)

S. Maha Lakshmi
(20U41A4419)

P. Manikanta
(20U41A4432)

K. Hemanth
(20U41A4428)

Under the Esteemed guidance of
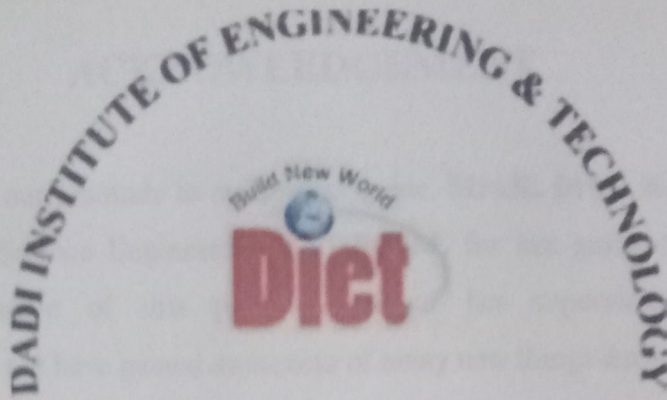
Mrs. K.Divya Kalyani

Assistant Professor, CSD&CSM.

DEPARTMENT OF COMPUTER SCIENCE ENGINEERING - AIML&DS

DADI INSTITUTE OF ENGINEERING & TECHNOLOGY

(AN AUTONOMOUS INSTITUTE)

(Approved by A.I.C.T.E., New Delhi & Permanently Affiliated to JNTU GV) **Accredited by NAAC with 'A' Grade and Inclusion u/s 2(f) & 12(B) of UGC Act** An ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified Institute.
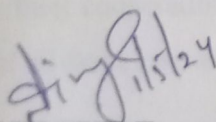NH-16, Anakapalle – 531002, Visakhapatnam, A.P.
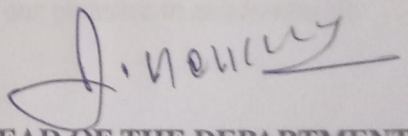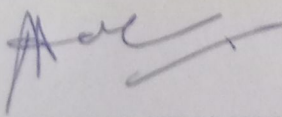
(2021-2024)

DEPARTMENT OF

COMPUTER SCIENCE Engineering - CSD&CSM

CERTIFICATE

This is to certify that the project report entitled "**Digitalized Voting System Using BlockChain Technology**" submitted by Sayeeda Fathima (20U41A4431), S. Maha Lakshmi (20U41A4419), P. Manikanta (20U41A4432) ,K. Hemanth (20U41A4428). In partial fulfillment of the requirements for award of the Degree of **Bachelor of Technology in Computer Science Engineering - Data Science** from Dadi Institute of Engineering & Technology(A), Anakapalle affiliated to JNTU-GV, accredited by NAAC with 'A' grade is a record of bonafide work carried out by them under my guidance and supervision.

PROJECT GUIDE

HEAD OF THE DEPARTMENT

Head of the Department
Computer Science & Engg
Dadi Institute of Engg. & Tech
Anakapalle-531002

EXTERNAL EXAMINER

2

ABSTRACT

This paper introduces a novel Digitalized Voting System Using python is designed to address the shortcomings of current voting methods employed in India. With a focus on enhancing transparency and trust in the electoral process, the system aims to overcome challenges present in both traditional and digital voting systems, including instances of mishaps and injustice. Leveraging blockchain technology, the proposed system seeks to ensure fair elections and minimize occurrences of injustice.While electronic voting has been introduced as a solution to paper-based voting, it has encountered obstacles primarily related to security and privacy concerns. To address these issues, our framework emphasizes the effectiveness of various components such as the polling process, hashing algorithms, contract and block creation, data accumulation, and result declaration.Utilising an adjustable blockchain method, the system aims to provide a robust solution to the security and data management challenges inherent in blockchain technology. By incorporating elements such as blockchain, hashing algorithms, block creation, OTP verification, and Ethereum, our approach endeavors to digitalize the voting process comprehensively. This paper contributes to the advancement of electoral integrity by presenting an improved manifestation of electronic voting, paving the way for more transparent and secure elections.

KEYWORDS:

Block chain,Hashing algorithms,Block creation, Ethereum, Digitalizing,

SENTIMENT ANALYSIS ON TWEETS OF TWITTER (X)

A PROJECT REPORT

Submitted by

UDAY KUMAR CHINNI   **K. SOMA SEKHAR**   **S. BHANU PRASAD**

(20U41A4414)   (20U41A4424)   (21U45A4406)

Under the esteemed guidance of

Mr. A. VENKATESWARA RAO

(Associate Professor & Department Head of CSD & CSM)

in partial fulfillment of the award of the degree

of

BACHELOR OF TECHNOLOGY

In

COMPUTER SCIENCE ENGINEERING - DATA SCIENCE

DEPARTMENT OF COMPUTER SCIENCE ENGINEERING – DS & AI/ML

DADI INSTITUTE OF ENGINEERING & TECHNOLOGY

(AN AUTONOMOUS INSTITUTE)

(Approved by A.I.C.T.E., New Delhi & Permanently Affiliated to JNTU GV)

Accredited by NAAC with 'A' Grade and Inclusion u/s 2(f) & 12(B) of UGC Act

An ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified Institute.

NH-16, Anakapalle – 531002, Visakhapatnam, A.P.

(2020-2024)

DEPARTMENT OF

COMPUTER SCIENCE ENGINEERING – DATA SCIENCE &

ARTIFICIAL INTELLIGENCE, MACHINE LEARNING

CERTIFICATE

This is to certify that the project report entitled **"SENTIMENT ANALYSIS ON TWEETS OF TWITTER (X)"** submitted by UDAY KUMAR CHINNI (20U41A4414), K. SOMA SEKHAR (20U41A4424), S. BHANU PRASAD (21U45A4406). In partial fulfilment of the requirements for award of the Degree of **Bachelor of Technology** in **Computer Science Engineering – Data Science**, from Dadi Institute of Engineering & Technology(A), Anakapalle affiliated to JNTUGV, accredited by NAAC with 'A' grade, is a record of bona fide work carried out by them under my guidance and supervision.

Mr. A. VENKATESWARA RAO
(ASSOCIATE PROFESSOR)
(PROJECT GUIDE)

Mr. A. VENKATESWARA RAO
(ASSOCIATE PROFESSOR)
(HEAD OF DEPARTMENT)

Head of the Department
Computer Science & Engg
Dadi Institute of Engg. & Tech
Anakapalle-531002

EXTERNAL EXAMINER

ABSTRACT

The internet's widespread usage and rapid technological advancements have revolutionized the way we communicate and interact with each other, leading to an unprecedented increase in available data, especially unstructured real-time data. Platforms like Twitter and Facebook have emerged as major players in facilitating online learning, opinion sharing, and global communication over the last decade. Among these platforms, Twitter has particularly gained prominence due to its real-time nature, brevity in messages, and wide user base, making it a valuable source of information and a hub for discussions on various topics.

Given the dynamic and unstructured nature of opinions expressed on Twitter, sentiment analysis has garnered substantial attention in both academic research and industry applications. Sentiment analysis, also known as opinion mining, involves the use of natural language processing, text analysis, and computational linguistics to systematically identify, extract, and quantify subjective information from textual data. This project aims to apply sentiment analysis techniques to Twitter data to gain insights into individual opinions on specific discussions, topics, or events.

Sentiment analysis plays a crucial role in classifying tweets as positive, negative, or occasionally neutral, providing valuable insights into large-scale discussions happening on the platform. By analyzing the sentiment of tweets, one can understand public opinion, gauge the overall sentiment towards a particular topic or event, and even predict trends or sentiment shifts over time.

The project employs a variety of machine learning algorithms, including Logistic Regression, LightGBM (Gradient Boosting Machine), XGBoost (Extreme Gradient Boosting), and Support Vector Machine (SVM), to analyze Twitter data and perform sentiment analysis. These algorithms are well-suited for handling large datasets, extracting relevant features from text data, and classifying tweets into different sentiment categories with high accuracy.

Assessing the accuracy of these machine learning algorithms is essential to determine the most effective approach for sentiment analysis on the Twitter platform. Accuracy metrics such as precision, recall, F1-score, and area under the receiver operating characteristic curve (AUC-ROC) can be used to evaluate the performance of each

algorithm and identify the one that achieves the highest accuracy in sentiment classification.

Moreover, the project may also explore techniques such as feature engineering, word embeddings, and ensemble methods to further improve the performance of sentiment analysis models on Twitter data. Additionally, considering the evolving nature of language and the constant influx of new terms and expressions on social media platforms, the project may incorporate techniques for handling slang, sarcasm, and contextual ambiguity in tweets to enhance the accuracy of sentiment analysis results.

Overall, sentiment analysis on Twitter data holds immense potential for understanding public opinion, identifying emerging trends, and informing decision-making processes in various domains, including marketing, politics, public health, and social research. By leveraging machine learning algorithms and advanced natural language processing techniques, this project aims to unlock valuable insights from the vast amount of unstructured textual data available on the Twitter platform.