Criterion 1: Curricular Aspects

1.3 Curriculum Enrichment

1.3.4.1: Number of students undertaking field projects / internships / student projects

Programme Name: M.E Computer Science and Engineering.

Sl.No.	Description	Page Number
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Criterion 1: Curricular Aspects

1.3 Curriculum Enrichment

1.3.4.1: Number of students undertaking field projects / internships / student projects

Programme Name: M.E Computer Science and Engineering

Student Projects Proof

A DYNAMIC APPROACHES TOWARDS SENSITIVE LABEL PRIVACY PRESERVATION WITH AUTOMIZATION FOR DATA PUBLISHING

A PROJECT REPORT PHASE I

Submitted by

KAVIBHARANI S (927621MCS003)

in partial fulfillment for the award of the degree

of

MASTER OF ENGINEERING

in

COMPUTER SCIENCE AND ENGINEERING

M.KUMARASAMY COLLEGE OF ENGINEERING
(An Autonomous Institution, Affiliated to Anna University, Chennai)

KARUR -639 113

DECEMBER 2022

M.KUMARASAMY COLLEGE OF ENGINEERING

(An Autonomous Institution, Affiliated to Anna University, Chennai)

BONAFIDE CERTIFICATE

Certified that this project report **"A DYNAMIC APPROACHES TOWARDS SENSITIVE LABEL PRIVACY PRESERVATION WITH ANATOMIZATION FOR DATA PUBLISHING"** is the bonafide work of **"KAVIBHARANI S (927621MCS2003)"** who carried out the project work under my supervision.

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Submitted for Project Work Phase I viva voce examination held on 28.12.2022

INTERNAL EXAMINER

28/12/2022

EXTERNAL EXAMINER

DECLARATION

I affirm that the Project report titled "ENHANCING **PACKET DELIVERY RATIO USING GRAY HOLE ATTACK IN MANET**" being submitted in partial fulfillment for the award of **Master of Engineering in Computer Science and Engineering**, is the original work carried out by me. It has not formed the part of any other project report or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

S. Kavibharani

KAVIBHARANI S (927621MCS2003)

I certify that the declaration made by the above candidate is true to the best of my knowledge.

Name & Signature of the supervisor with date

Dr. S. SUJANTHI

ACKNOWLEDGEMENT

Behind every achievement lies an unfathomable sea of gratitude to those who actuated it, without them it would have never came into existence, to them we lay the word of gratitude imprinted within us.

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DATE: 28.12.2022 [KAVIBHARANI S]

AN ACCURATE PREDICTION OF BITCOIN PRICE USING DATA SCIENCE AND DEEP LEARNING

A PROJECT REPORT PHASE I

Submitted by

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INTERNAL EXAMINER

20/12/2022

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I am thankful to my faculty members of CSE department for their continuous direction and guidance and timely support extended for me to carry out my project successfully.

DATE: 28.12.2022

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[NAGA KANNIKA S]

ABSTRACT

Bitcoin uses a peer-to-peer technology to operate with no central authority or banks. Bitcoin is open-source; its design is public, nobody owns or controls Bitcoin and everyone can take part. Digital currency brings into use as open source software in pseudonymous creator Satoshi Nakamoto It is a crypto currency, so-called because it uses cryptography to control the creation and transfer of money. The goal of this work is to compare the accuracy of bitcoin price in USD prediction based on Long Short-term Memory (LSTM) network with self-attention. Real-time price data is collected by Pycurl from Bitfine. LSTM model is implemented by Keras and TensorFlow. The proposed model used in this work is mainly to present a classical comparison of time series forecasting, as expected, it could make efficient prediction limited in short-time interval, and the outcome depends on the time period. The LSTM could reach a better performance, with extra, indispensable time for model training, especially via CPU.

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Mission of the Department

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SYMBOLS

□	Bitcoin
$	Dollar

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LIST OF ABBREVIATIONS

POW	Proof Of Work
FINCEN	Financial Crimes Enforcement Network
MSB	Money Service Business
Seg Wit	Segregated Witness
CEC	Center For Cition Studies
KDD	Knowledge Discovery In Databases
SVM	Support Vector Machine
MAE	Mean Absolute Error
MSE	Mean Squared Error
RMSE	Roof Mean Squared Error
LSTM	Long-short Term Memory
ARIMAX	Auto Regressive Integrated Moving Average with exogenous input
BTC	Bitcoin
MBTC	Millibitcoin
RNN	Recurrent Neural Network
BNN	Bayesian Neural Network
MAPE	Mean Absolute Percentage
KNN	K Nearest Nearest Neighbour
ANN	Artificial Neural Networks
AUC	Area Under Curve

QUALITY ANALYSIS OF EGGS USING IMAGE PROCESSING WITH INTERPRETABLE MACHINE LEARNING MODEL

A PROJECT REPORT PHASE I

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in partial fulfillment for the award of the degree

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DECEMBER 2022

AN ANALYSIS OF DIFFERENT DATA SAMPLING METHOD FOR MEDICAL DATA USING MACHINE LEARNING

A PROJECT REPORT PHASE I

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DECEMBER 2022

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INTERNAL EXAMINER

28/12/2022

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DECLARATION

I affirm that the Project report titled "**AN ANALYSIS OF DIFFERENT DATA SAMPLING METHOD FOR MEDICAL DATA USING MACHINE LEARNING**" being submitted in partial fulfillment for the award of **Master of Engineering in Computer Science and Engineering**, is the original work carried out by me. It has not formed the part of any other project report or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

28/12/22.

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ACKNOWLEDGEMENT

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DATE: 08/12/2022 [SHANMUGASUNDARAM P]

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ABSTRACT

In today's era of internet, the amount of data generation is growing on increasing. With the development of artificial intelligence, big data classification technology provides the advantageous help for the medicine auxiliary diagnosis research. While due to the different conditions in the different sample collection, the medical big data is often imbalanced.

Imbalanced data typically refers to a condition in which several data samples in a certain problem is not equally distributed, thereby leading to the underrepresentation of one or more classes in the dataset.

Traditional classification algorithms usually assume that the number of samples in each class is similar and their misclassification cost during training is equal. However, the misclassification cost of patient samples is higher than that of healthy person samples. Therefore, how to increase the identification of patients without affecting the classification of healthy individuals is an urgent problem.

The straightforward method to solve this problem is the resampling method by adding records to the minority class or deleting ones from the majority class. In this paper, we have experimented with different SMOTE oversampling and undersampling methods.

The purpose of this work is to balance the imbalanced data using different sampling techniques. We use two medical dataset i.e **PIMA INDIAN DIABETICS DATASET** and **CHRONIC KIDNEY DISEASE DATASET** download from kaggle repository.

So that in this project, split in to two phases. One is data sampling and other one is Prediction model.

In this project we used different data sampling methods like **SMOTE, K-means SMOTE, SMOTENC (SMOTE for Nominal and Continuous) and SMOTEN (SMOTE for Nominal).**

After getting modified data sampling dataset, to apply the different Machine learning algorithms i.e **Decision tree, Random Forest, SVM and KNN** to predict the prediction of Chronic Kidney Disease and diabetic disease in early stage.

Based on **accuracy, precision and Recall** value from implemented tested machine learning model to find out the best Sampling as well as machine learning algorithms.

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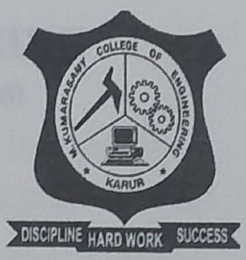
LIST OF ABBREVIATIONS

ML	Machine Learning
CKD	Chronic Kidney Disease
SMOTE	Synthetic Minority Oversampling Technique
ADASYN	Adaptive Synthetic Sampling Approach
ACK	Acknowledgement



A DYNAMIC APPROCHES TOWARDS SENSITIVE LABEL PRIVACY PRESERVATION WITH ANATMIZTION FOR DATA PUBLISHING

A PROJECT REPORT PHASE II

Submitted by

S.KAVIBHARANI (927621MCS003)

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APRIL 2023

M.KUMARASAMYCOLLEGEOF ENGINEERING

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BONAFIDE CERTIFICATE

Certified that this project report **"A DYNAMIC APPROCHES TOWARDS SENSTIVE LABEL PRIVACY PRESERVATION WITH AUTOMIZATION FORDATA PUBLISHING"** is the bonafide work of **S.KAVIBHARANI (927621MCS003)"** who carried out the project work during the academic year 2022-2023 under my supervision. Certified furtherthat other best of my knowledge the work reported herein does not form partof any other thesis or dissertation on the basis of which a degree or award was occasion on this or any other candidate.

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DECLARATION

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S.KAVIBHARANI (927621MCS003)

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14/4/23

Name & Signature of the supervisor with date

[Dr. S. SUBANTHI]

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S. Kavibharani

DATE: 12.04.2023 [S.KAVIBHARANI]

M.KUMARASAMY COLLEGE OF ENGINEERING

Programme: Master of Engineering - Computer Science and Engineering

Vision of the Department

To achieve education and research excellence in Computer Science and Engineering

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ABSTRACT

Data in its original form, however, typically contain sensitive information about the individuals. Directly publishing raw data will violate the privacy of people involved. Consequently, it becomes increasingly important to preserve the privacy of published data. An attacker is apt to identify an individual from the published tables, with attacks through the record linkage, attribute linkage, table linkage or probabilistic attack. Although algorithms based on generalization and suppression has been proposed to protect the sensitive attributes and resist these multiple types of attacks, they often suffer from large information loss by replacing specific values with more general ones. Alternatively, anatomization and permutation operations can de-link the relation between attributes without modifying them. In this paper, to propose a scheme Sensitive Label Privacy Preservation with Anatomization (SLPPA) was to protect the privacy of published data. The security analysis shows our scheme is provably secure, and the performance evaluation demonstrates the overhead of data dynamics and the dispute arbitrations are reasonable .

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L-Low M-Medium H-High

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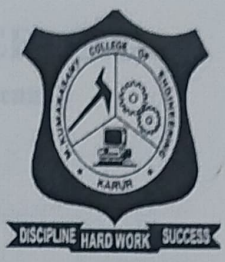
LIST OF ABBREVIATIONS

SLPPA	Service Location Protocol Profit Authentication
SLP	Stop Loss Payment
QOS	Quality Of Service
RREQ	Route Request
RREP	Route Reply
RERR	Route Error
SAS	Software As A Service
AODV	Ad-Hoc-On-Demand Distance Vector
PAS	Platform As A Service
IDAD	Intrusion Detection Using Anomaly Detection
DTN	Delay Tolerant Network
ACK	Acknowledgement
VANET	Vehicular Ad Hoc Network
SPAN	Smart Phone Ad Hoc Networks
IMANET	Internet Based Mobile Ad Hoc Network
IOT	Internet Of Things
IDS	Intrusion Detection System



AN ACCURATE PREDICTION OF BITCOIN PRICE USING DATA SCIENCE AND DEEP LEARNING

PROJECT REPORT

Submitted by

Mrs.S.NAGA KANNIKA (927621MCS004)

in partial fulfillment for the award of the degree

of

MASTER OF ENGINEERING

in

COMPUTER SCIENCE AND ENGINEERING

M.KUMARASAMY COLLEGE OF ENGINEERING

KARUR – 639 113

ANNA UNIVERSITY : CHENNAI 600025

APRIL 2023

M.KUMARASAMY COLLEGE OF ENGINEERING

(An Autonomous Institution, Affiliated to Anna University, Chennai)

BONAFIDE CERTIFICATE

Certified that this project report **"AN ACCURATE PREDICTION OF BITCOIN PRICE USING DATA SCIENCE AND DEEP LEARNING"** is the bonafide work of "**NAGA KANNIKA S (927621MCS004)**" who carried out the project work under my supervision.Certified futher that to the best of my knowledge the work reported herein does not form part of any other thesis or dissertation on the basis of which a degree or award was conferred on an early occasion on this or any other candidate.

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Submitted for Project Work viva voce examination held on 12.04.2023

INTERNAL EXAMINER

EXTERNAL EXAMINER

DECLARATION

I affirm that the Project report titled **"AN ACCURATE PRDICTION OF BITCOIN PRICE USING DATA SCIENCE AND DEEP LEARNING"** being submitted in partial fulfillment for the award of Master of Engineering in Computer Science and Engineering, is the original work carried out by me. It has not formed the part of any other project report or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

S.NAGA KANNIKA (927621MCS004)

I certify that the declaration made by the above candidate is true to the best of my knowledge.

12/4/25

Name & Signature of the supervisor with date

Dr. B. Padmini Devi

ACKNOWLEDGEMENT

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NOTE: L-LOW,M-MEDIUM,H-HIGH

12/9/23

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LISTS OF ABBREVIATIONS

SHA	-	Secure Hash Algorithm
POW	-	Proof Of Work
RPOW	-	Reusable Proof-Of-Work system
DB	-	Database
IRC		Internet Relay Chat
FINCEN	-	Financial Crimes Enforcement Network
MSB	-	Money Service Business
Seg Wit	-	Segregated Witness
CEC	-	Center For Cition Studies
KDD	-	Knowledge Discovery In Databases
SVM	-	Support Vector Machine
MAE	-	Mean Absolute Error
MSE	-	Mean Squared Error
RMSE	-	Roof Mean Squared Error
LSTM	-	Long-short Term Memory
ARIMAX	-	Auto Regressive Integrated Moving Average with exogenous input
BTC	-	Bitcoin
MBTC	-	Millibitcoin
RNN	-	Recurrent Neural Network
BNN	-	Bayesian Neural Network
MAPE	-	Mean Absolute Percentage
KNN	-	K Nearest Nearest Neighbour
ID3		Iterative Dichotomiser 3
ANN	-	Artificial Neural Networks
AUC	-	Area Under Curve
฿	-	Bitcoin
$	-	Dollar

AIRCELL BASED CONVOLUTIONAL NEURAL NETWORK TECHNIQUE FOR EGG QUALITY ANALYSIS

A PROJECT REPORT PHASE II

Submitted by

Mrs.G.RAMYA SHRI (927621MCS006)

in partial fulfillment for the award of the degree

of

MASTER OF ENGINEERING

in

COMPUTER SCIENCE AND ENGINEERING

M.KUMARASAMY COLLEGE OF ENGINEERING

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APRIL 2023

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BONAFIDE CERTIFICATE

Certified that this project report "**AIRCELL BASED CONVOLUTIONAL NEURAL NETWORK TECHNIQUE FOR EGG QUALITY ANALYSIS**" is the bonafide work of "**G.RAMYASHRI (927621MCS006)**" who carried out the project work during the academic year 2022-2023 under my supervision.Certified further that to the best of my knowledge the work reported herein does not form part of any other thesis or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

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Submitted for Project Work Phase II viva voce examination held on 12.04.2023

INTERNAL EXAMINER

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DECLARATION

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I certify that the declaration made by the above candidate is true to the best of my knowledge.

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Name & Signature of the supervisor with date

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I explore my gratitude to **Dr.M.Murugasen, M.E., Ph.D., Head of the Department, Computer Science and Engineering** for permitting me to undertake this project as part of the curriculum.

I am indebted to my project supervisor **Dr.S.Thilagamani ,M.E.,Ph.D., Professor and Dean, Computer Science and Engineering,** for her constant help and creative ideas over the period of project work .

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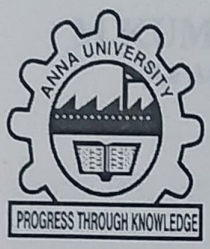

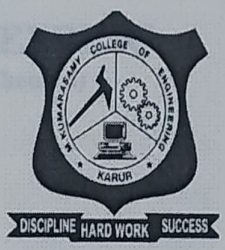

AN ANALYSIS OF DIFFERENT DATA SAMPLING METHOD FOR MEDICAL DATA USING MACHINE LEARNING

A PROJECT REPORT PHASE II

Submitted by

SHANMUGASUNDARAM P (927621MCS007)

in partial fulfillment for the award of the degree

of

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APRIL 2023

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BONAFIDE CERTIFICATE

Certified that this project report "**AN ANALYSIS OF DIFFERENT DATA SAMPLING METHOD FOR MEDICAL DATA USING MACHINE LEARNING**" is the bonafide work of "**SHANMUGASUNDARAM P (927621MCS007)**" who carried out the project work under my supervision. Certified further that to the best of knowledge the work reported herein does not form part of any other thesis or dissertion on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

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P. Shanmugasundaram

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I certify that the declaration made by the above candidate is true to the best of my knowledge.

V. MANI & V.M 11/4/23

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I explore my gratitude to **Dr.M.MURUGESAN, M.E., Ph.D., Head, Department of Computer Science and Engineering** for his unwavering moral support throughout the evolution of the project.

I am indebted to my project supervisor **Mr.V.Mani, M.E., Associate Professor, Computer Science and Engineering,** for his constant help and creative ideas over the period of project work.

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M2: To promote research in the area of computer science and engineering with the focus on innovation

M3: To transform students into technically competent professionals with societal and ethical responsibilities

Program Outcomes (POS)

PO1: An ability to independently carry out research / investigation and development work to solve practical problems.

PO2: An ability to write and present a substancial technical report/document.

PO3: Students should be able to demonstrate a degree of mastery over the area asper the specialization of the program .The mastery should be at a level higher than than the requirements in the appropriate bachelor program.

PO4: Ability to discriminate,evaluate,analyze and synthesize existing and new knowledge and integration of the same for enhancement of knowledge in Computer Science and Engineering.

PO5: Ability to think laterally and originally to identify,formulate and solve an engineering problem in Computer Science and Engineering and effectively utilize appropriate scientific and engineering techniques and methodologies in the problem solving process.

PO6: Ability to apply the tools from optimization, probability,statistics,simulation and engineering economic analysis,including fundamental application of the tools in IT industry invoving uncertainty and scarce or expensive resources.

Program Educational Objectives (PEOs)

PEO 1: To empower graduates to identify,create and solve computing problem by applying their knowledge of computing principles and mathematical theory to develop sustainable solutions to current and future computing problems.

PEO 2: To develop research attitude in graduates and to explore it for higher education Endeavors and constantly upgrade their skills with an attitude towards lifelong learning.

PEO 3: To facilitate graduates to acquire skills to communicate effectively with the society and contribute to the betterment of the society as a commited technical personnel.

ABSTRACT

In today's era of internet, the amount of data generation is growing on increasing. With the development of artificial intelligence, big data classification technology provides the advantageous help for the medicine auxiliary diagnosis research. While due to the different conditions in the different sample collection, the medical big data is often imbalanced. Traditional classification algorithms usually assume that the number of samples in each class is similar and their misclassification cost during training is equal. However, the misclassification cost of patient samples is higher than that of healthy person samples. Therefore, how to increase the identification of patients without affecting the classification of healthy individuals is an urgent problem. The straightforward method to solve this problem is the resampling method by adding records to the minority class or deleting ones from the majority class. In this project, we have experimented with different SMOTE oversampling methods. The purpose of this work is to balance the imbalanced data using different sampling techniques. We use two medical dataset i.e PIMA INDIAN DIABETICS DATASET and CHRONIC KIDNEY DISEASE DATASET download from kaggle repository. So that in this project, split in to two phases. One is data sampling and other one is Prediction model. In this project we used different data sampling methods like SMOTE, K-means SMOTE, SMOTENC (SMOTE for Nominal and Continuous) and SMOTEN (SMOTE for Nominal). After getting modified data sampling dataset, to apply the different Machine learning algorithms i.e Decision tree, Random Forest, SVM and KNN to predict the prediction of Chronic Kidney Disease and diabetic disease in early stage. Based on Accuracy, Precision and Recall value from implemented tested machine learning model to find out the best Sampling as well as machine learning algorithms.

PROJECT MAPPED WITH PO AND PEO

ABSTRACT	PO's MAPPED	PEO's MAPPED
In today's era of internet, the amount of data generation is growing on increasing. With the development of artificial intelligence, big data classification technology provides the advantageous help for the medicine auxiliary diagnosis research. While due to the different conditions in the different sample collection, the medical big data is often imbalanced. Traditional classification algorithms usually assume that the number of samples in each class is similar and their misclassification cost during training is equal. However, the misclassification cost of patient samples is higher than that of healthy person samples. Therefore, how to increase the identification of patients without affecting the classification of healthy individuals is an urgent problem. The straightforward method to solve this problem is the resampling method by adding records to the minority class or deleting ones from the majority class. In this project, we have experimented with different SMOTE oversampling methods. The purpose of this work is to balance the imbalanced data using different sampling techniques. We use two medical dataset i.e PIMA INDIAN DIABETICS DATASET and CHRONIC KIDNEY DISEASE DATASET download from kaggle repository. So that in this project, split in to two phases. One is data sampling and other one is Prediction model. In this project we used different data sampling methods like SMOTE, K-means SMOTE, SMOTENC (SMOTE for Nominal and Continuous) and SMOTEN (SMOTE for Nominal). After getting modified data sampling dataset, to apply the different Machine learning algorithms i.e Decision tree, Random Forest, SVM and KNN to predict the prediction of Chronic Kidney Disease and diabetic disease in early stage. Based on Accuracy, Precision and Recall value from implemented tested machine learning model to find out the best Sampling as well as machine learning algorithms.	PO1(H) PO2(M) PO3(H) PO4(H) PO5(L) PO6(M)	PEO1(H) PEO2(M) PEO3(H)

NOTE: 1-LOW, 2-MEDIUM, 3-HIGH

V.m 11/4/23

SUPERVISOR

M. 7/11/23

HEAD OF THE DEPARTMENT

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LIST OF ABBREVIATIONS

ML	Machine Learning
CKD	Chronic Kidney Disease
SMOTE	Synthetic Minority Oversampling Technique
ADASYN	Adaptive Synthetic Sampling Approach
ACK	Acknowledgement
DT	Decision Tree
KNN	K- Nearest Neighbour
SVM	Support Vector Machine
RF	Random Forest
TP	True Positive
TN	True Negative
FP	False Positive
FN	False Negative
CSV	Comma Separated Value