GEETHANJALI COLLEGE OF ENGINEERING AND TECHNOLOGY
(Autonomous)

Cheeryal (V), Keesara (M), Medchal Dist., Telangana - 501 301

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

MINI PROJECT ABSTRACT
IV B.Tech. I SEMESTER CSE - C Section

BATCH NUMBER: C16	Mini Project	Academic Year: 2024-2025

PROJECT TITLE:

A GUI-Based Web Interface for Credit Card Fraud Detection System

TEAM MEMBERS:

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ABSTRACT

This project introduces a novel approach to credit card fraud detection by harnessing advanced machine learning techniques within the realm of data science. Utilizing data preprocessing, exploratory data analysis (EDA), model training, and feature engineering on a dataset comprising transactions by European cardholders, the project focuses on constructing a robust predictive model capable of accurately identifying fraudulent transactions amidst a highly imbalanced dataset. The system will be deployed utilizing a Python-based Tkinter UI for local utilization and a web UI using Flask for online integration.

With a focus on innovation and precision, this project strives to enhance fraud detection capabilities and safeguard financial assets from evolving fraudulent activities by emphasizing innovation and precision. Its future scope involves integrating real-time transaction monitoring to swiftly detect and prevent fraudulent activities, thus strengthening security measures within the financial industry.

Keywords: UnderSampling, Oversampling, SMOTE, Logistic regression, Random forest classifier, Gradient boosting classifier, Decision tree classifier and Support vector classifier.

Objective:

- Develop an innovative fraud detection system using advanced machine learning techniques to accurately identify fraudulent transactions in imbalanced datasets.
- Deploy the system with both a Python-based Tkinter UI for local usage and a web UI powered by Flask, while implementing real-time transaction monitoring to enhance financial security.

Commercializable: Yes/No: Yes

REFERENCES:

- Dal Pozzolo, Andrea; Caelen, Olivier; Le Borgne, Yann-Ael; Waterschoot, Serge; Bontempi, Gianluca. Learned lessons in credit card fraud detection from a practitioner perspective, Expert systems with applications,41,10,4915-4928,2014, Pergamon
- Ogwueleka, Francisca Nonyelum. "Data mining application in credit card fraud detection system." Journal of Engineering Science and Technology 6.3 (2011): 311-322.

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