**Project Synopsis: Credit Card Fraud Detection**

**1. Title**

**Credit Card Fraud Detection Using Python**

**2. Introduction**

Credit Card Fraud has become increasingly prevalent with the expansion of online shopping and digital payment systems. The need for robust fraud detection mechanisms has never been more critical. This project focuses on developing a systematic approach to detect credit card fraud by analyzing past transaction data. By employing data analysis techniques, we aim to draw meaningful insight that classifies transactions as fraudulent or legitimate. This analysis not only aids in immediate fraud detection but also enhances the overall performance of fraud detection systems through continuous learning and adaptation.

**3. Objectives**

The primary objectives of this project are:

* To explore and understand the features of the credit card fraud dataset.
* To perform data pre-processing, including handling missing values and outliers.
* To identify significant features influencing credit card fraud through statistical analysis.
* To build predictive models that accurately classify transactions as fraudulent or legitimate.
* To visualize results and present actionable insights to improve fraud detection mechanisms.