Intelligent Fraud Detection System Using Machine Learning

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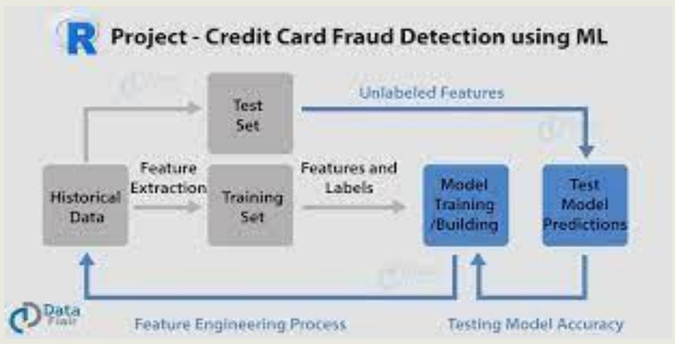
Session: Jul. – Dec. 2024

Abstract

Credit card fraud has become a pervasive issue in today's financial landscape, causing significant financial losses to both financial institutions and cardholders. To combat this problem, advanced machine learning techniques are increasingly employed for real-time fraud detection and prevention This research focuses on the development of a robust and efficient fraud detection system that uses machine learning algorithms to identify fraudulent transactions in credit card data. The system operates in real-time, continuously analyzing cardholder transactions and comparing them against historical data to flag potentially fraudulent activities.

Introduction

- Fraudulent activities are increasing in digital world This study seeks to investigate the use of logistic regression.
- It particular of detecting bank transaction fraud while highlighting its benefits and drawbacks.



Objectives

- Identify fraudulent transactions accurately
- Detect fraud in real-time
- Optimize the system for scalability
- Improve decision-making
- Adapt to evolving fraud patterns

Methodology

- To build a project like this a well-structured methodology is essential.
- This project should primarily be developed using Python.
- Collect historical transaction data then Preprocess the data by cleaning, handling missing values, and transforming it into a format suitable for analysis.

Strategy Used

- Data Collection and Preprocessing
- Logistic Regression Model Development

Benefits of Proposed System

- Economic
- Security
- 24 x 7 Availability

Results

The Fraudulent Detection seeks to create a reliable and accurate fraud detection model by utilizing logistic regression and sophisticated data analysis techniques.
In comparison to the current system the financial institution should be better equipped to proactively identify and stop fraudulent transactions

Conclusion

The scope of a project on fraud detection using logistic regression in bank transactions is both promising and extensive.
The project has the potential to significantly impact the financial industry by enhancing the security and efficiency of bank transactions

Acknowledgement

Project Guide – Prof. Ankita Agrawal
Project In-charge – Prof. Deepak S. Chouhan
Project Coordinator – Prof. Shahida Khan
HOD – Dr. Prashant Lakkadwala