Credit Card Fraud Detection

Project Definition:

A credit card project definition could be: "Developing a system for issuing and managing credit cards to customers, including processing transactions, tracking balances, and ensuring security."

Project Objective:

The objective of a credit card fraud detection project is to identify and prevent fraudulent transactions to protect cardholders and financial institutions.

DESIGN THINKING:

Data source: Understood, dataset contains transaction data with amount, timestamp, merchant, and card details.

Data preprocessing: Prepare data by fixing errors, address missing vales, and make values consistent for analysis.

Feature Engineering: Transaction frequency deviation , Transaction amount deviation, Geolocation data, Time of day analysis, Merchant category, User behavior profiling, Device fingerprinting, Social network analysis, IP Address Analysis, Biometric data.

Model Selection: For fraud detection, suitable machine learning algorithms include:

1. Logistic Regression

2. Random Forest

3. Gradient Boosting (e.g., XGBoost).

Model Training: Certainly, you can train the selected model (e.g., Logistic Regression, Random Forest, or Gradient Boosting) using the preprocessed data for fraud detection.

Evaluation:You can evaluate the model's performance using metrics like accuracy, precision, recall, F1-score, and ROC-AUC.

DATASHARINGPLATFORM :

  The objective of a credit card fraud detection dashboard or platform is to provide real-time monitoring and insights into potential fraudulent transactions for better decision-making and security management.