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Project 4: Fraud Detection in Financial Transactions

Description:

The project aims to solve the problem of fraud detection in financial transactions using machine learning. By analyzing the provided dataset containing transaction details, customer information, and fraud labels, we can build a predictive model to identify fraudulent transactions. The project will utilize Scikit-learn, Python Pandas, and Tableau for data analysis, model training, and visualization.

Outline

- Python Pandas
    - Jupyter notebook to:
        - Load, read, explore, and clean up data
        - Build, test, and optimize the machine learning model using Scikit-learn and TensorFlow
    - Tableau
        - Bar graph (display correlation between account type / average transaction amount and whether an account is fraudulent)
        - Bar graph (distribution of transaction types)
        - Pie chart (fraudulent vs non-fraudulent transactions)
- Dashboard
    - Display data and findings

Sources
- https://www.kaggle.com/datasets/bannourchaker/frauddetection
    - A synthetic dataset for a mobile payments application, which provides information on the sender and recipient of a transaction as well as whether transactions are tagged as fraud or not fraud.