TITLE:

CREDIT CARD DEFAULT PREDICTION

Presented by: Nikhil Kumar Singh

Introduction

- *Overview of the project*
- *Importance of predicting credit card defaults*
- *Objectives of the project*

Project Objective

Objective 01

Predict whether a credit card holder will default on their payment

Objective 02

Aid financial institutions in assessing and managing credit risk

Data Source

- Dataset: Default of Credit Card Clients Dataset
- Source: Kaggle
- Link: Dataset

Data Structure

- Features: LIMIT_BAL, SEX, EDUCATION, MARRIAGE, AGE, PAY_0, PAY_2, PAY_3, PAY_4, PAY_5, PAY_6, BILL_AMT1, BILL_AMT2, BILL_AMT3, BILL_AMT4, BILL_AMT5, BILL_AMT6, PAY_AMT1, PAY_AMT2, PAY_AMT3, PAY_AMT4, PAY_AMT5, PAY_AMT6

- Target: default.payment.next.month

Data Preprocessing

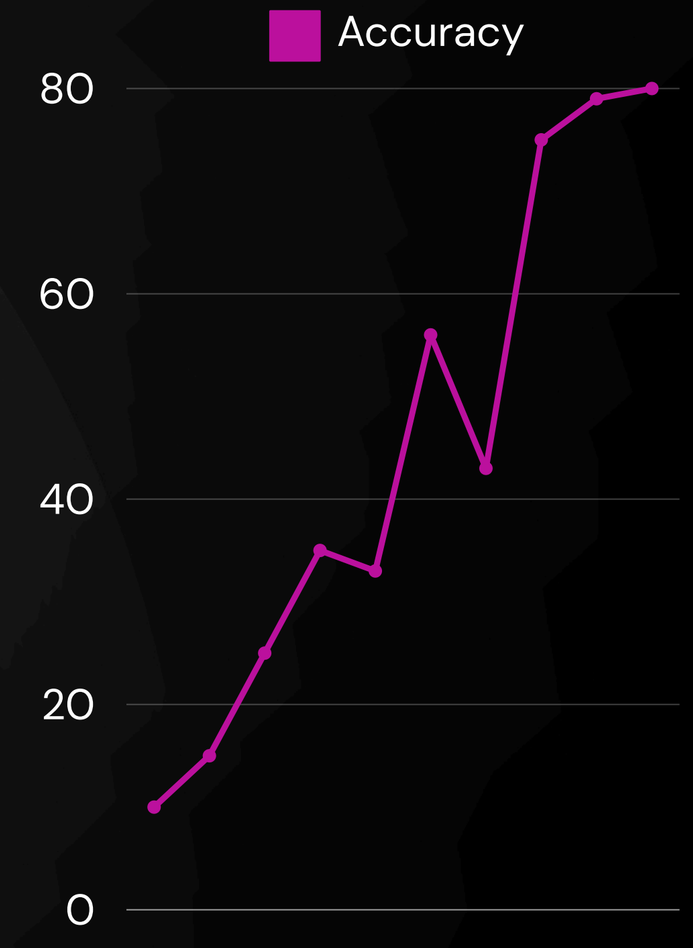
- Handling missing values
- Scaling features
- Handling Imbalanced Data

Model Selection

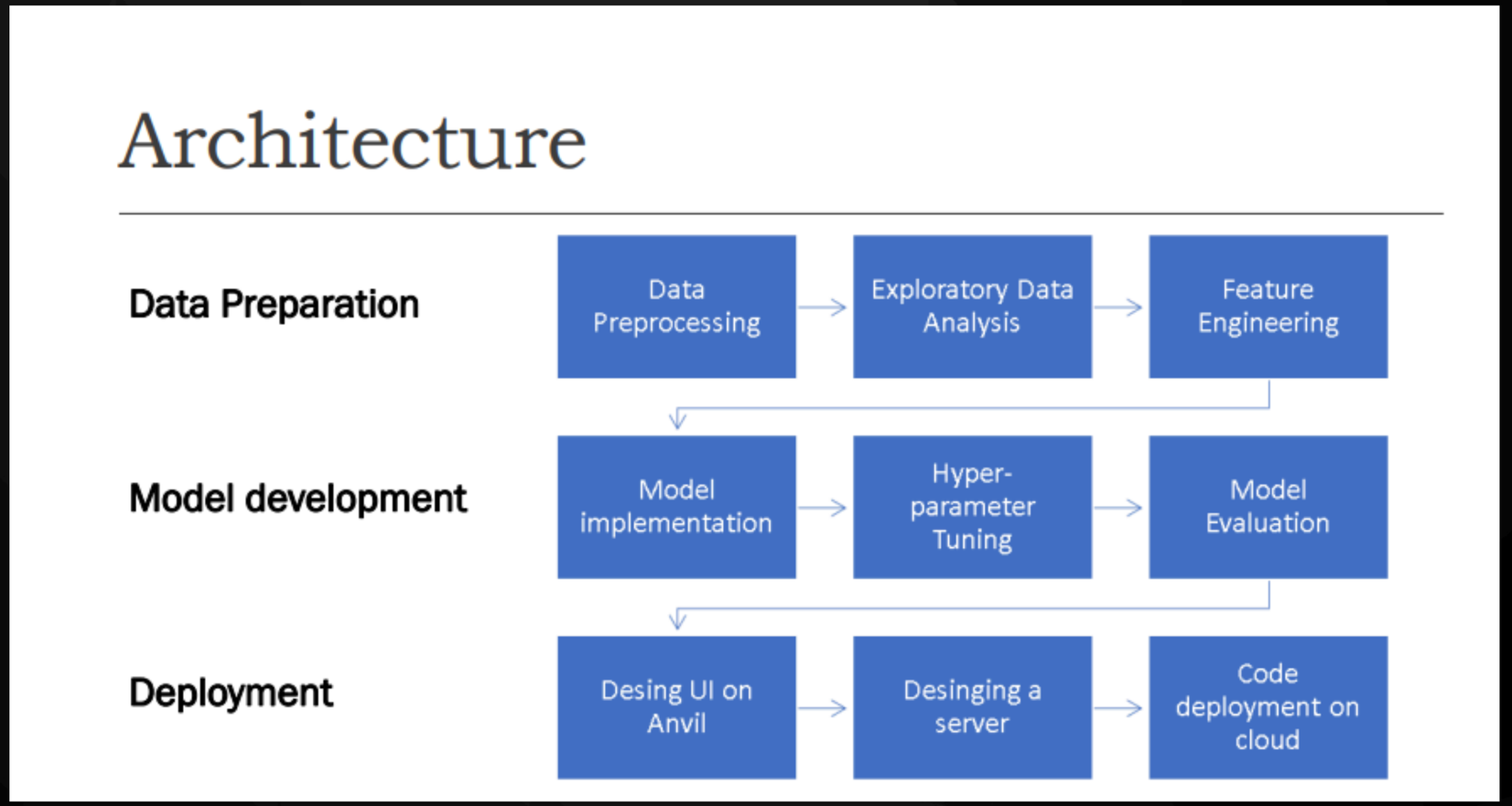
- Algorithm used: XGBoost Classifier
- Reason for selection: High performance, robustness, and interpretability

Model Training

- Training process
- Model tuning and optimization
- Achieved accuracy: 80%



System Architecture



UI Design

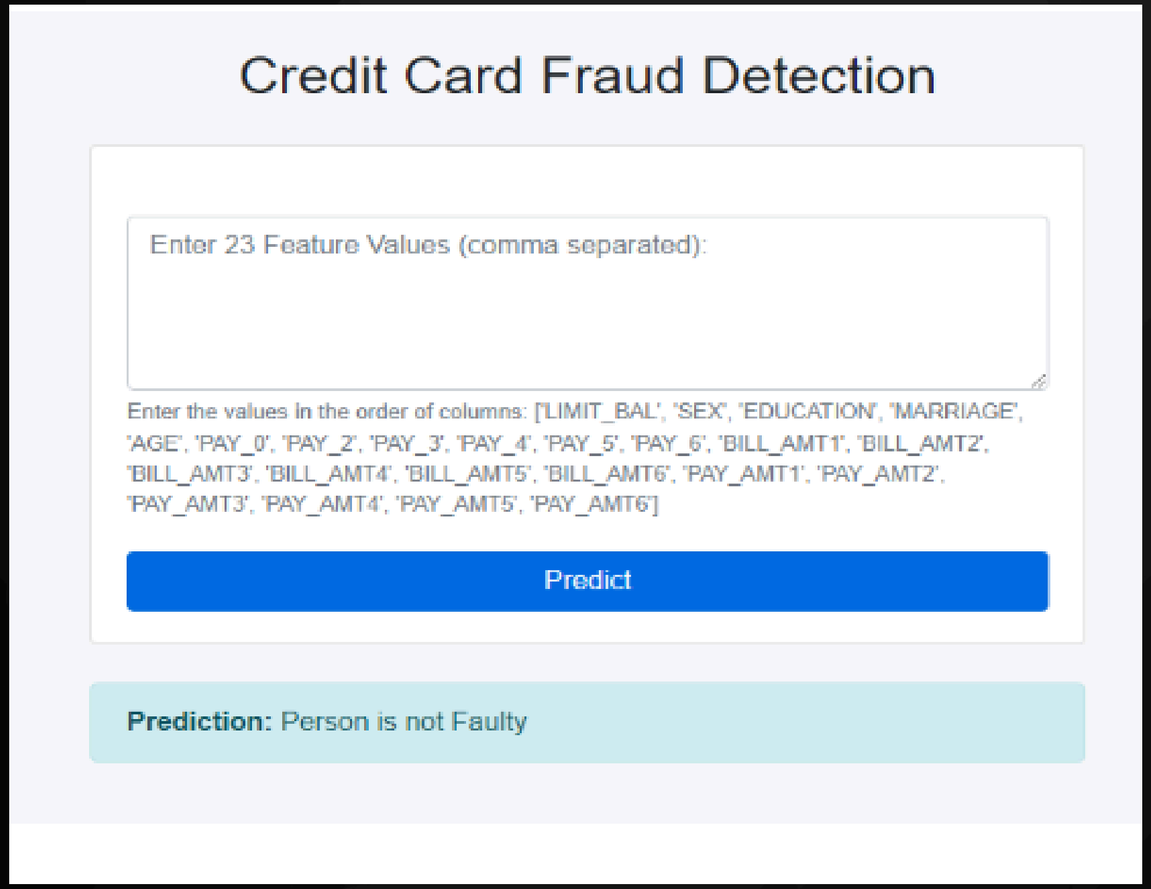
Web Application

- Developed using Flask
- User interface for input and prediction
- Features and functionalities

Wireframe Design

- Key components of the UI: Header, Input Form, Prediction Result Area

Model Results



Conclusion

- Summary:
  - The project successfully developed a predictive model using XGBoost to assess credit card default risk.
  - Data preprocessing and feature engineering were crucial steps to prepare the dataset for modeling.
- Key Findings:
  - Achieved an accuracy of 80% on the test data.
  - Important features influencing defaults included payment history and bill amounts.
- Future Work:
  - Improve model accuracy with more advanced techniques or additional data.
  - Integrate real-time data processing for dynamic predictions.
- Takeaways:
  - Predictive modeling can significantly aid in managing financial risks.
  - Effective data preprocessing and feature selection are essential for building robust models.

THANK YOU

For watching this presentation


9815805054


nikhilsinghxlx@gmail.com


www.linkedin.com/in/nikhilsinghxlx