Python for Data Science
(project)Presentation

SmartLoan Predictor

presented to Golam Mostofa Naeem

Metropolitan University,
Sylhet

presented by JUAIRIA CHOWDHURY

PDS-05-(10)
Metropolitan University,
Sylhet

INTRODUCTION

A loan predictor is a tool or system designed to assess the likelihood of a loan applicant's ability to repay based on various factors, which may include credit history, income, employment status, debt-to-income ratio, and other financial data. By analyzing these inputs, the loan predictor can forecast the risk associated with lending to the applicant, often resulting in a score or recommendation for the lender.

Why Choose a Loan Predictor?

- **Improved Accuracy**
- **Efficiency**
- **Objective Decision-Making**
- **Enhanced Customer Experience**

Importance of a Loan Predictor :

- **Risk Management**
- **Operational Savings**
- **Competitive Edge**

Dataset Description

Dataset Overview :

Source: *Historical loan prediction data from financial institutions.*

Key Features: Applicant income, loan amount, credit history, employment status, loan term, and more.

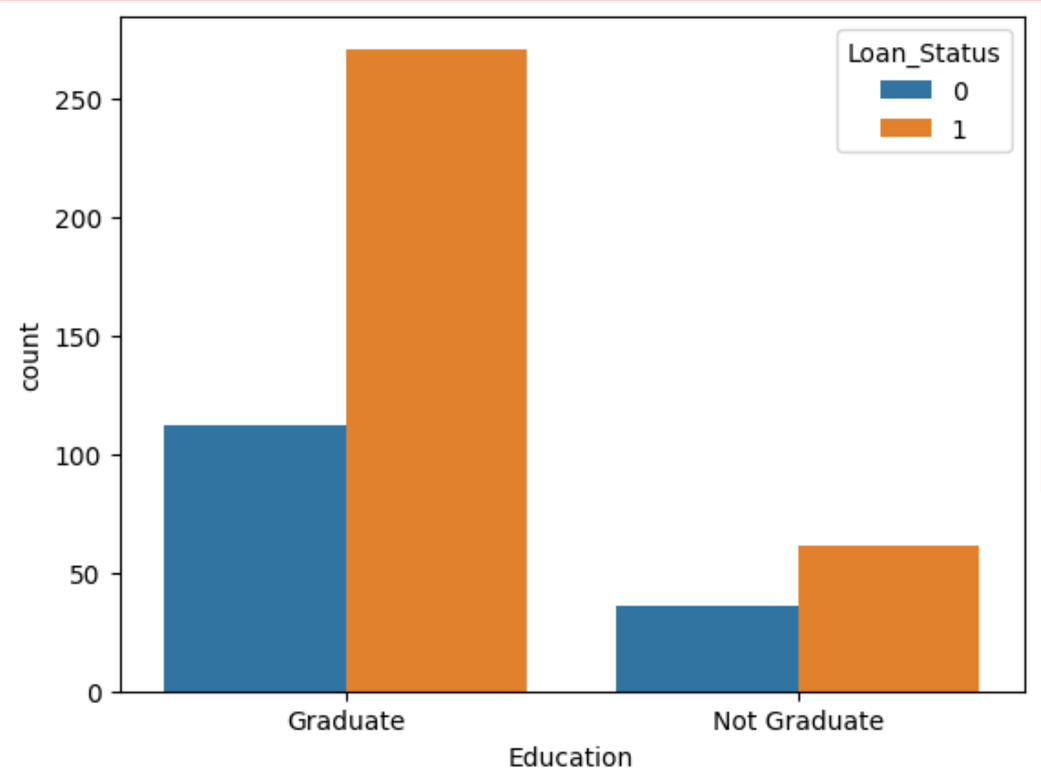
Preprocessing: Handling missing values, encoding categorical variables, and normalizing data for model training.

Scalability: Adapting the model to handle large datasets efficiently for real-world applications.

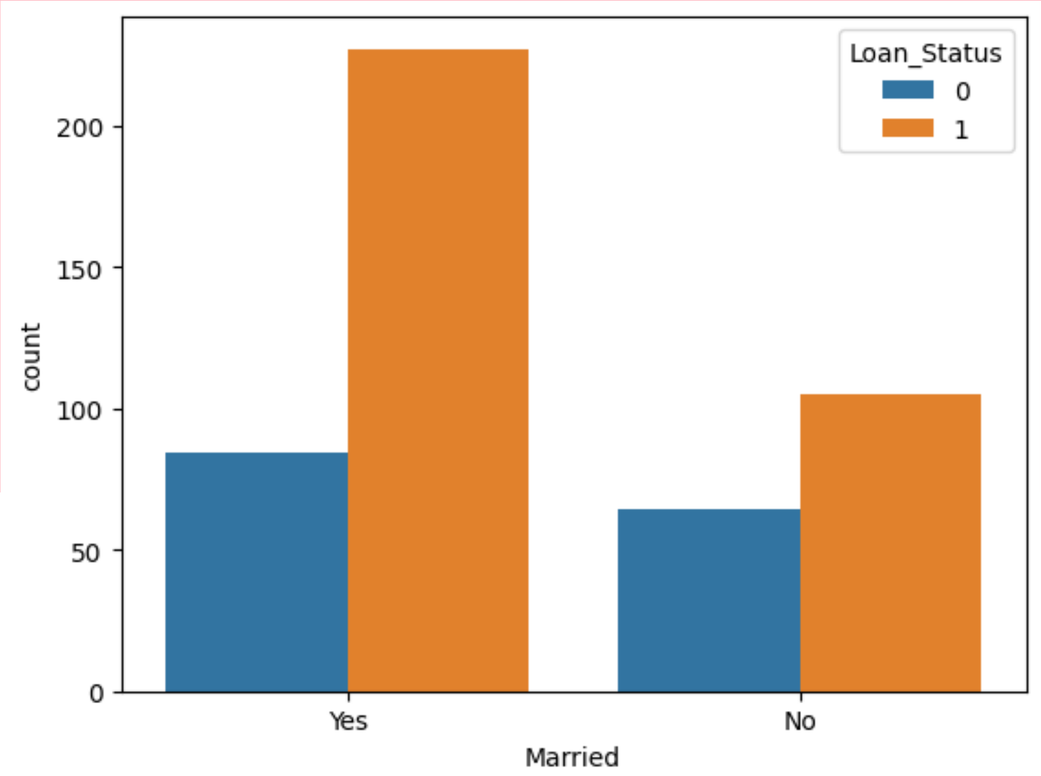
Feature Importance: Identifying which features most significantly impact loan approval decisions.

EDUCATION status loan count :

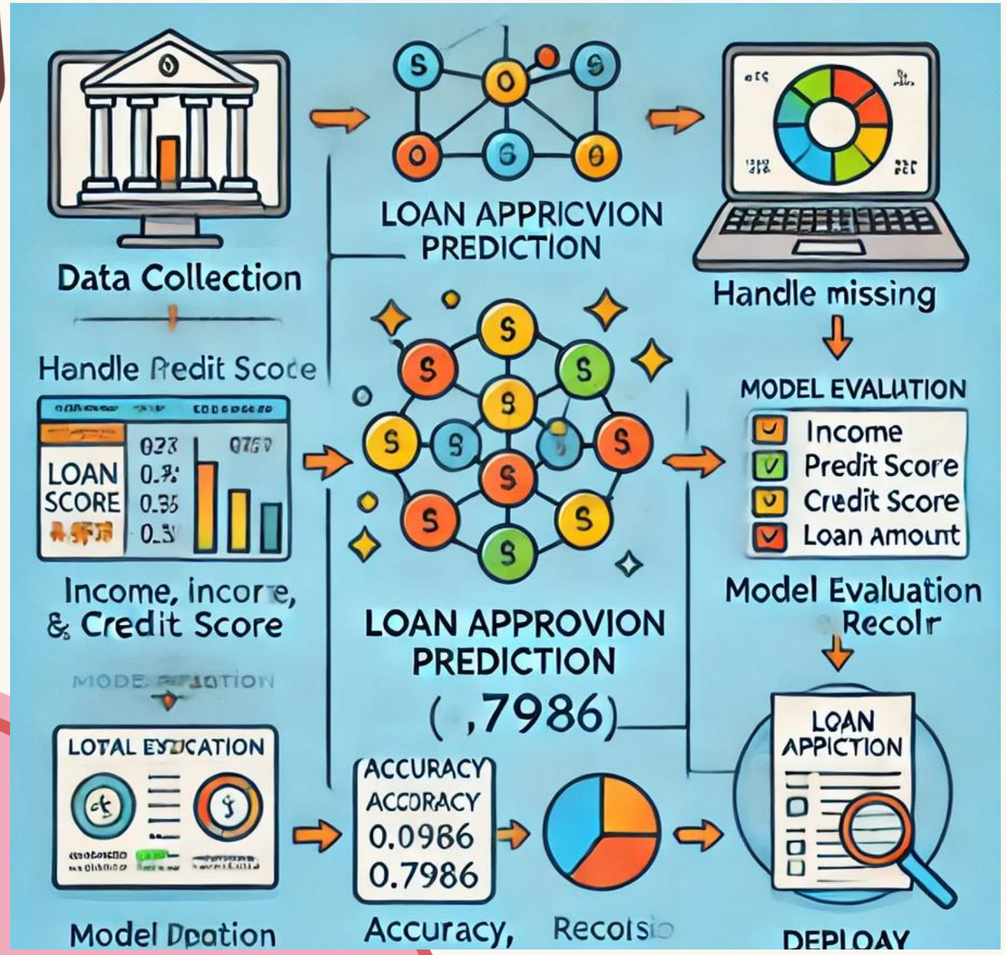
Graduate and not Graduate -->



Married Loan status count :



Data Analysis



Here's the flowchart representing the loan approval prediction model process. It covers the steps from data collection and preprocessing to model training, evaluation, and deployment for real-time loan approval predictions, with a focus on the accuracy achieved (0.7986) on the training data.

loan(Data)Analysis

Data Collection

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Data Preprocessing

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Data Splitting

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Feature Selection/Engineering

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Model Selection and Training

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Model Evaluation

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Model Optimization (Optional)

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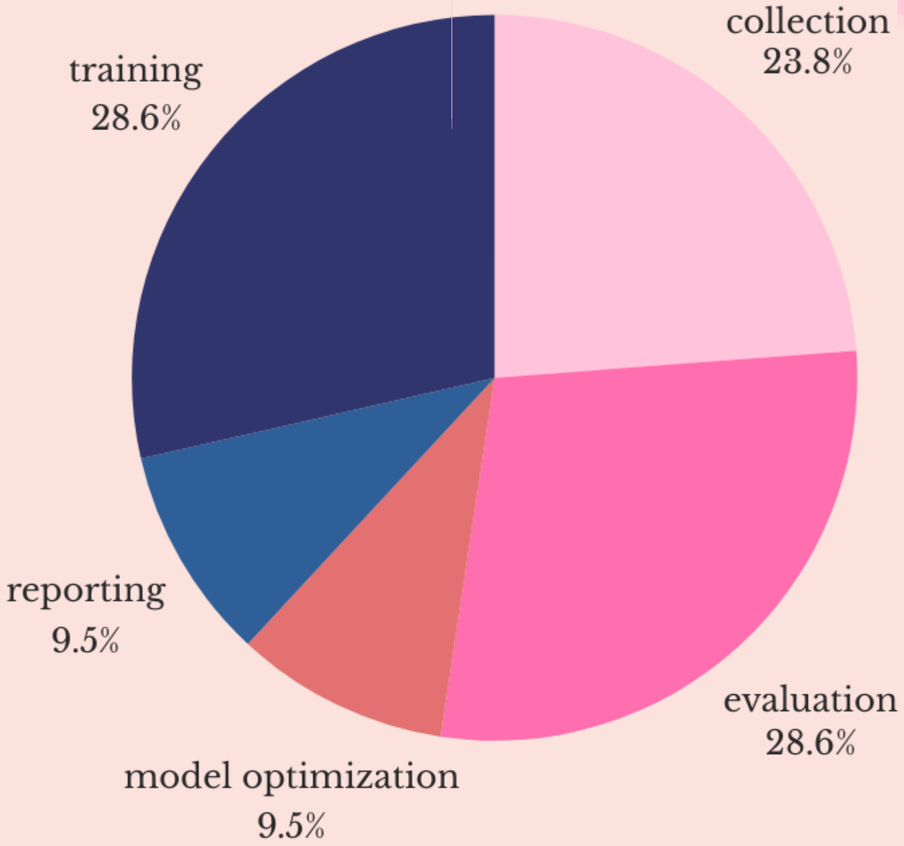
Insights and Reporting



MoDeL Training

1

Model Selection

choose a classification algorithm suited to the problem type and data characteristics. Aim for a model that balances accuracy and interpretability without overfitting.

2

Training Data

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3

Model Performanc e

Evaluate the model's effectiveness using metrics like accuracy, precision, and recall on test data to ensure reliable predictions.

Thank

Everyone

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