PYTHON PROJECT REVIEW

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CREDICT CARD DEFAULT PREDICTION

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Objectives

Goal:

To develop a predictive model that identifies credit card users at high risk of defaulting on payments, enabling proactive risk management for financial institutions.

Key Objectives:

- Risk Identification
- Feature Analysis
- Decision Support

Business Impact:

- Reduce bad debt by flagging high-risk customers.
- Optimize credit limit adjustments and collection strategies.

Methodology

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1. Data Preparation

2. Feature Engineering:

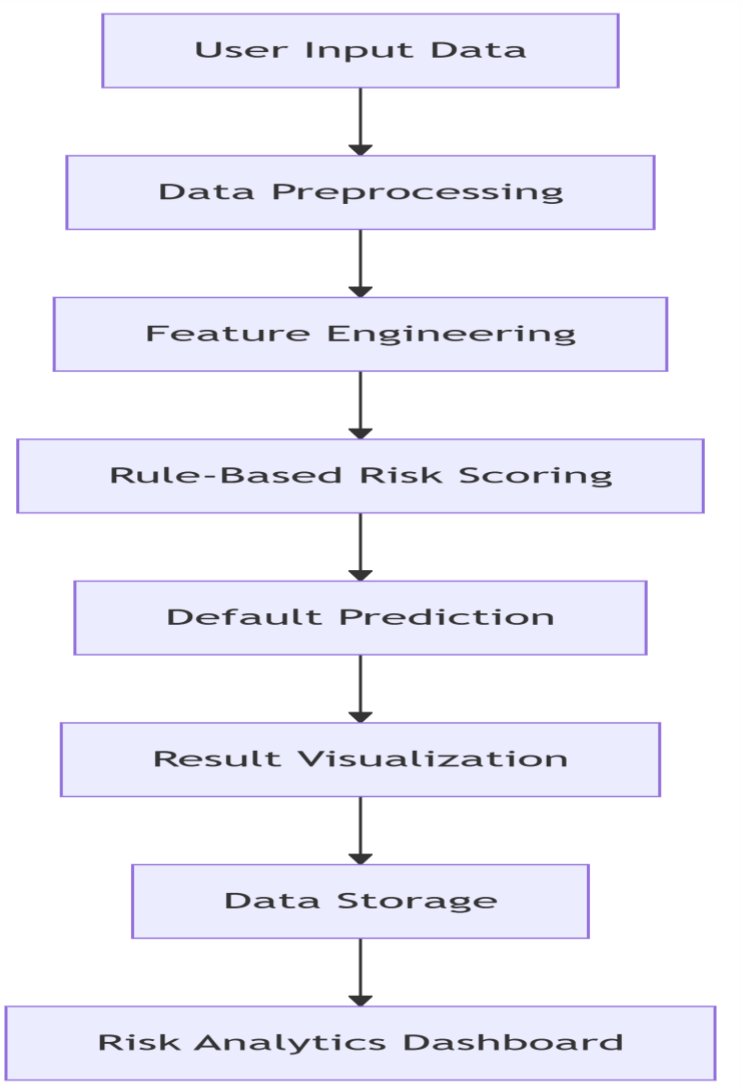
- Credit Utilization Ratio
- Payment Adequacy
- Delinquency Trend

3. Rule-Based Prediction Model

4. Deployment:

- Built interactive dashboard using Streamlit
- Real-time predictions + explanation of risk factors
- Logged all predictions to CSV for audit

Block Diagram



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Implementation of PANDAS

1. Data Loading & Inspection
2. Data Cleaning
3. Feature Engineering
4. Risk Calculation
5. Results Export

Key Pandas Functions Used

Function	Purpose
`read_csv()`	Load dataset
`map()`	Encode categorical variables
`np.select()`	Implement rule-based logic
`groupby().agg()`	Generate risk profiles
`to_csv()`	Save outputs

REFERENCES

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   🔗 DOI: 10.22214/ijraset.2023.60000

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