

TRAVIS LOAN CONSULTANCY LOAN APPROVAL RISK ANALYSIS

MAY 30, 2024

TRAVIS LOAN ANALYST



Travis Clark
Github:
TravisClark1432
Email:
Clark819@gmail.com

Everest
Cantu
Ceo Of Ingoude
Company

Reyes
Mang
Ceo Of Ingoude
Company

AGENDA

- 01** EXECUTIVE SUMMARY
- 02** RELEVANCY
- 03** DATA OVERVIEW
- 04** ANALYSIS
- 05** RECOMMENDATION
- 06** FUTURE PROJECT

EXECUTIVE SUMMARY

Project Overview

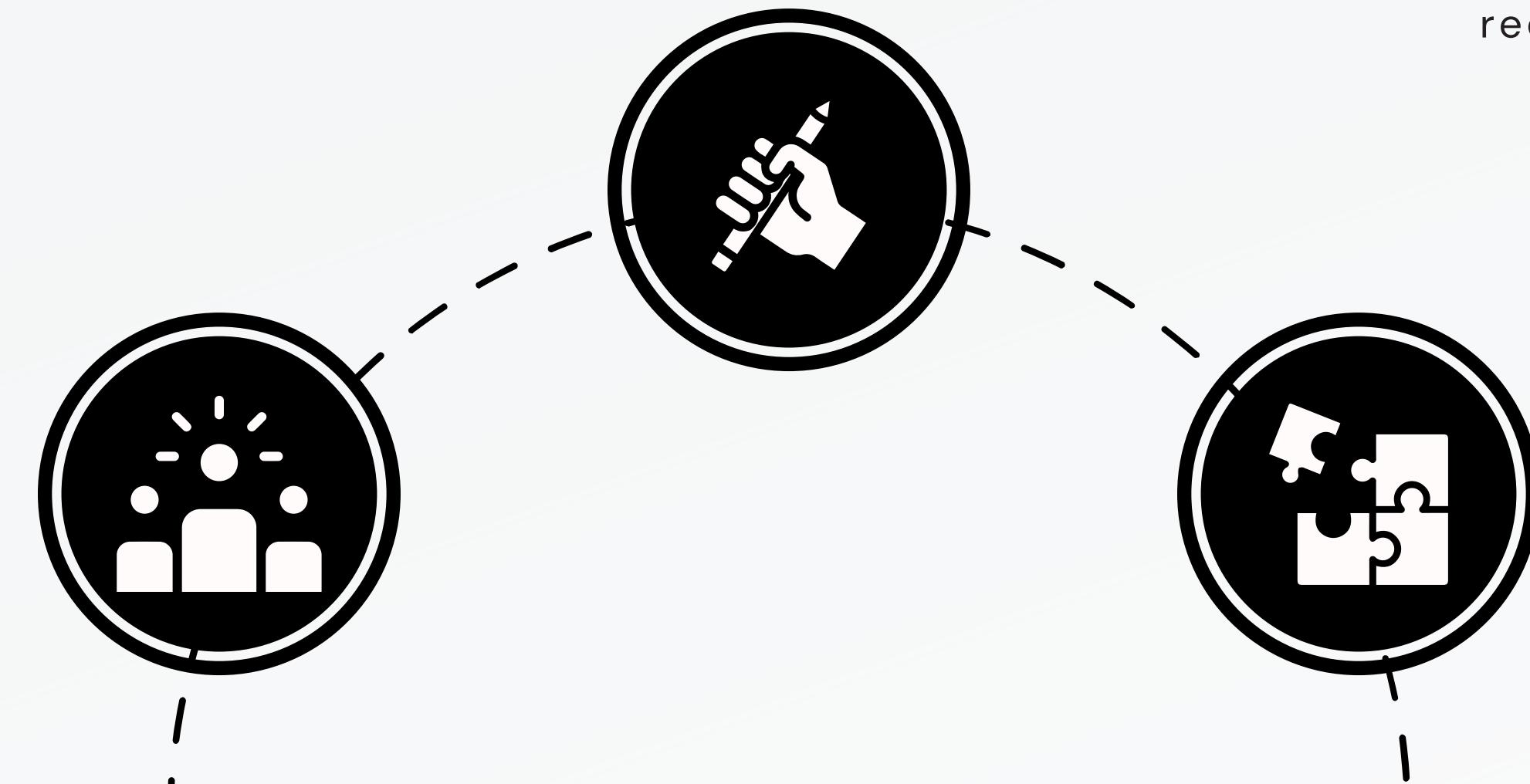
Travis Loan Consultant wants to analyze features that influence loan approvals of applicants

Project Objective

Build a predictive model that can predict risky and non-risky loan applicants

Bottom Line

73% of high-risk applicants were correctly identified by the model, significantly reducing the likelihood of approving risky loans.



RELEVANCY OF THE ANALYSIS



Accurately predicting loan approval risk

=

Minimize losses/More stable and profitable lending operations

Advanced risk assessment techniques

=

Offering more attractive loan terms to low-risk applicants



DATA OVERVIEW

Source:

- Kaggle Loan Approval Dataset based on India Residents
- 252,000 applicants
- Loan applicants characteristics and their risk assessment

Limitations:

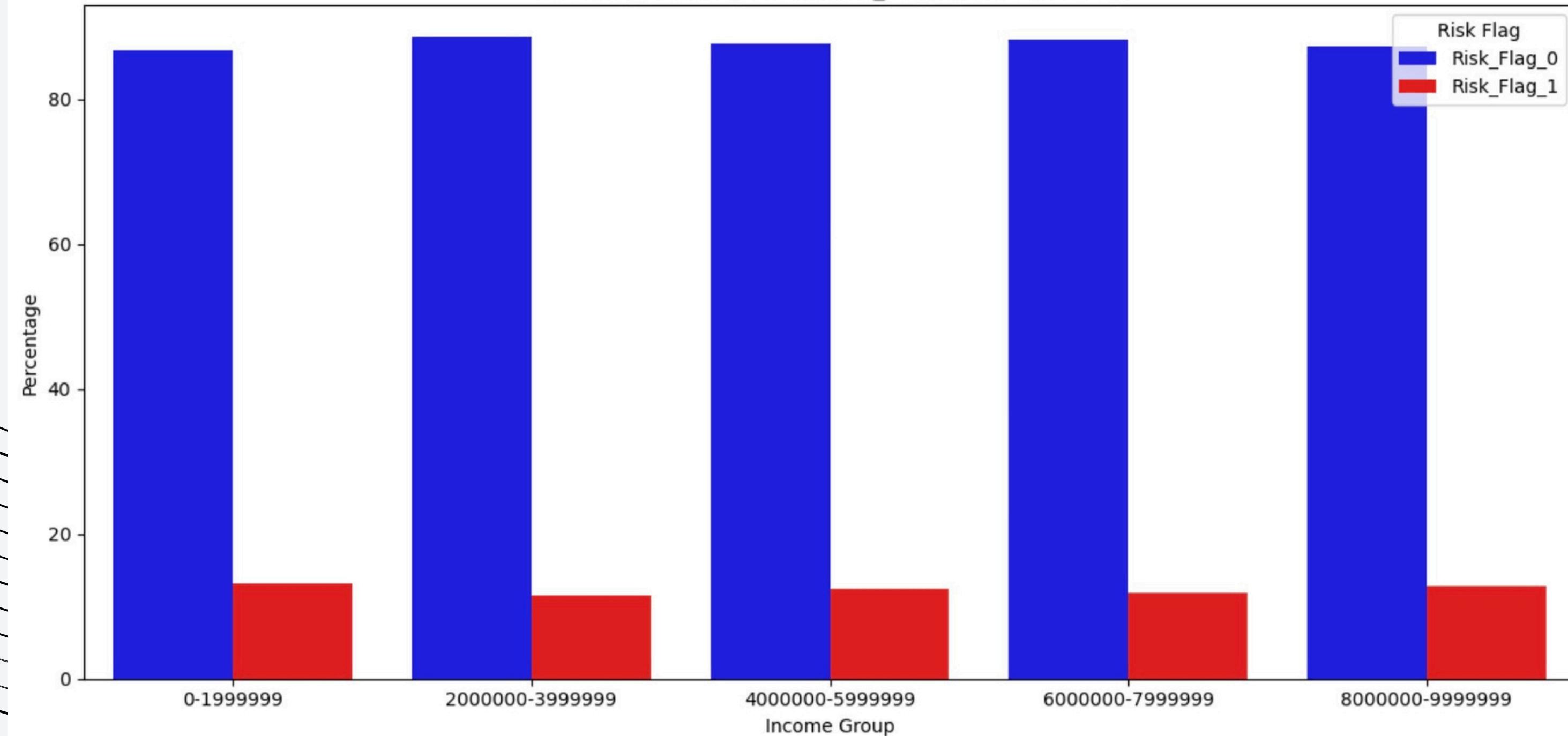
- Class Imbalance (Risky/ Non-Risky)
- Regional Variations (economic conditions)

EDA INSIGHTS

Income Distribution

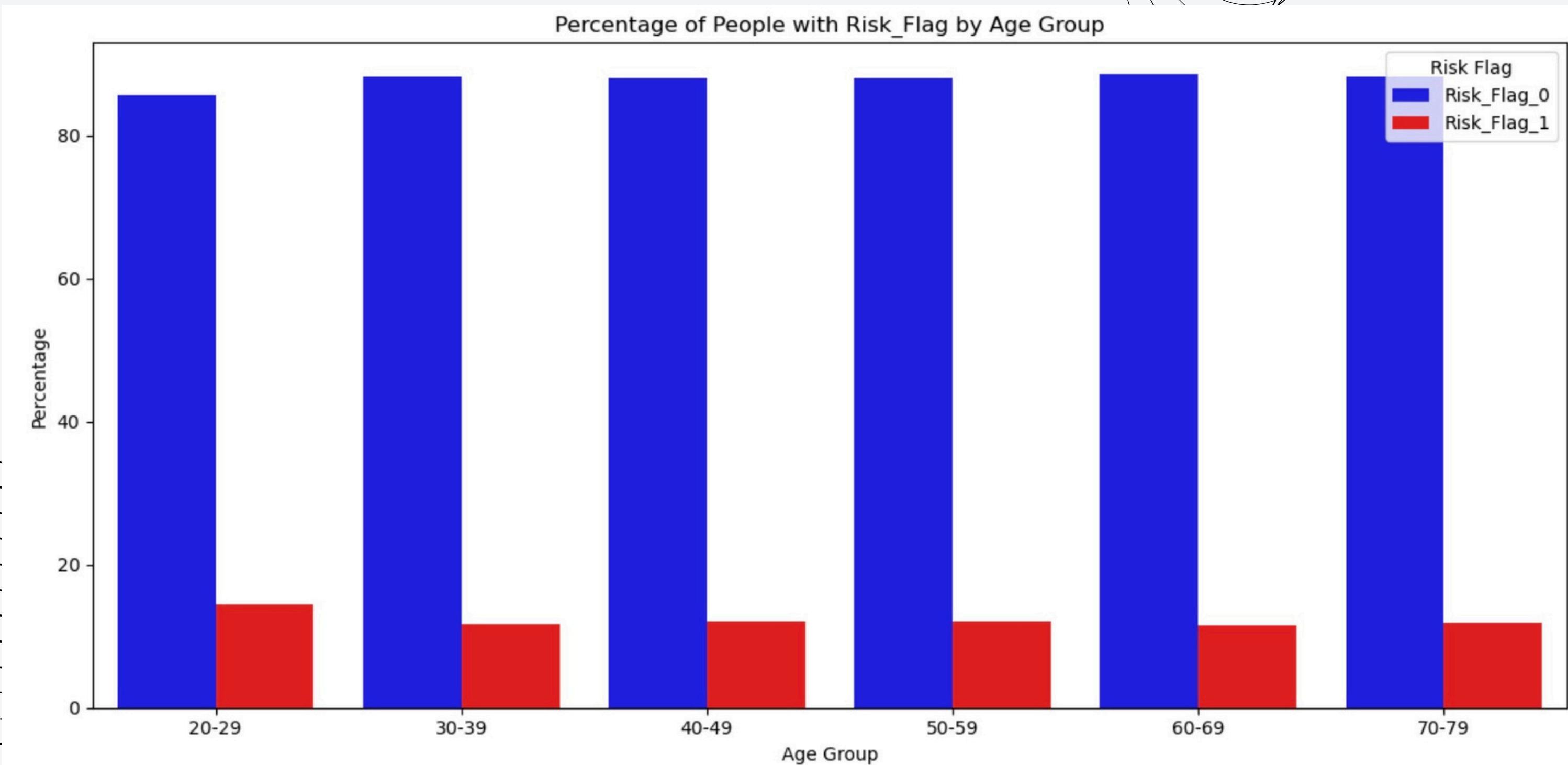
- Higher-income applicants are less likely to be classified as high-risk.

Percentage of People with Risk_Flag by Income Group



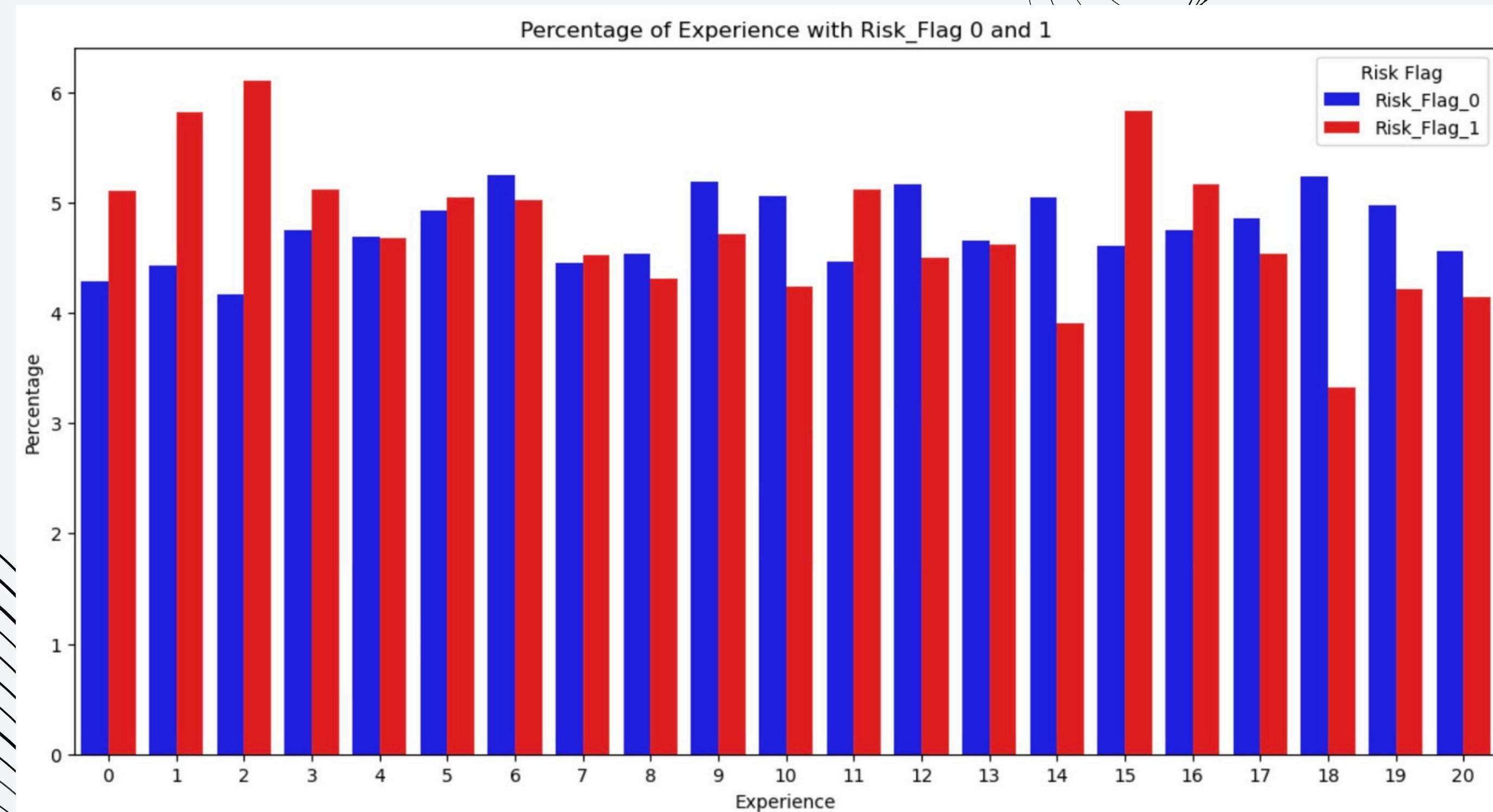
Age Distribution

- Older applicants tend to have a lower risk of loan default, indicating that age is strong predictors of loan approval.



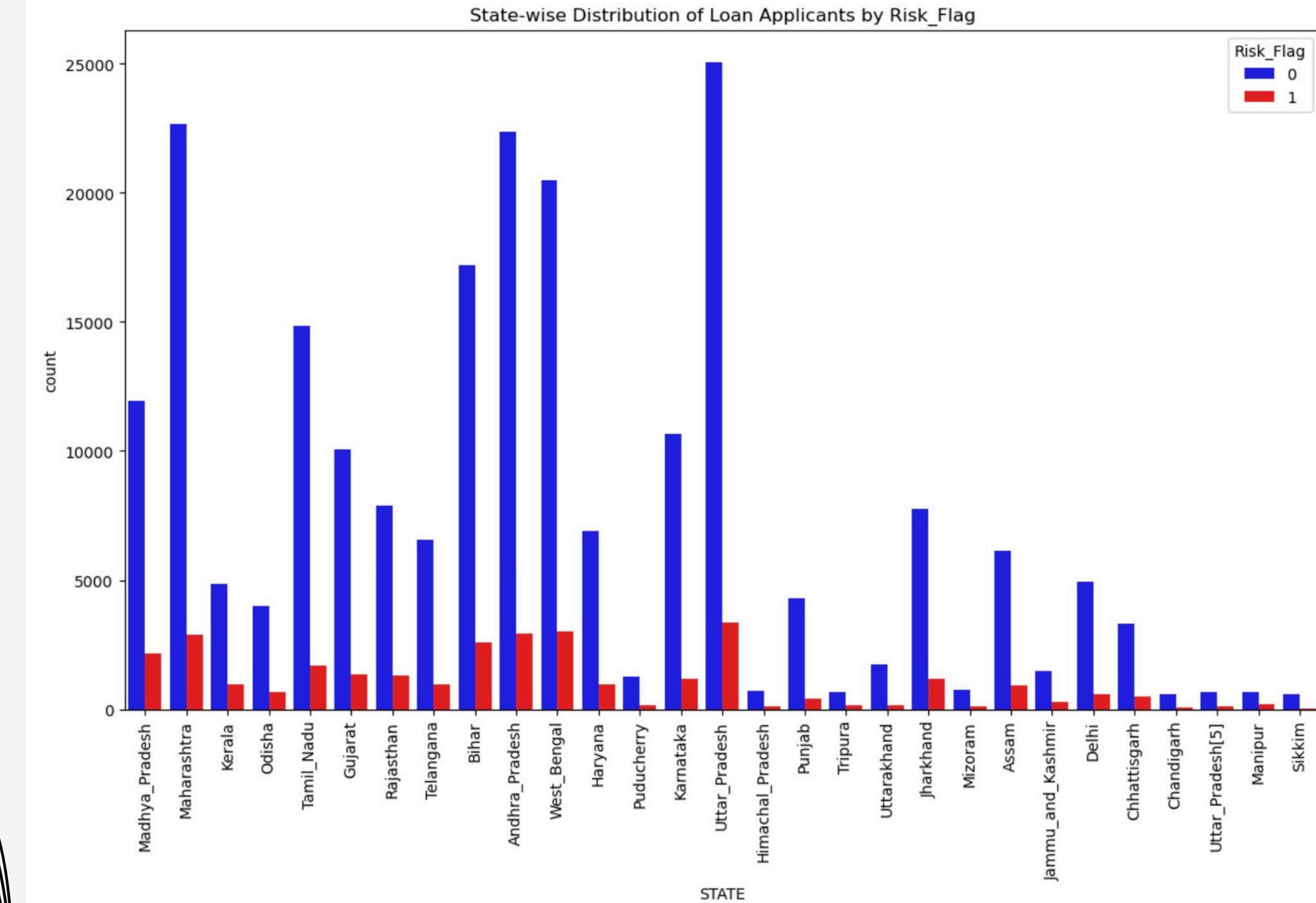
Experience Distribution

- Applicants with more years of work experience tend to have a lower risk of loan default, indicating that experience are strong predictors of loan approval.



Geographical Impact

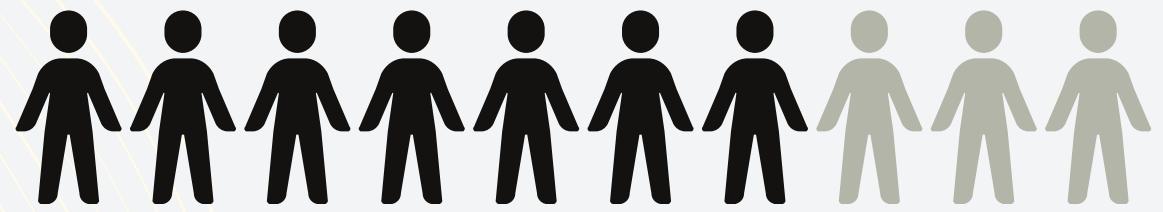
- Loan approval risk varies significantly across different states, indicating the importance of regional economic conditions and local policies in loan risk.



MODEL

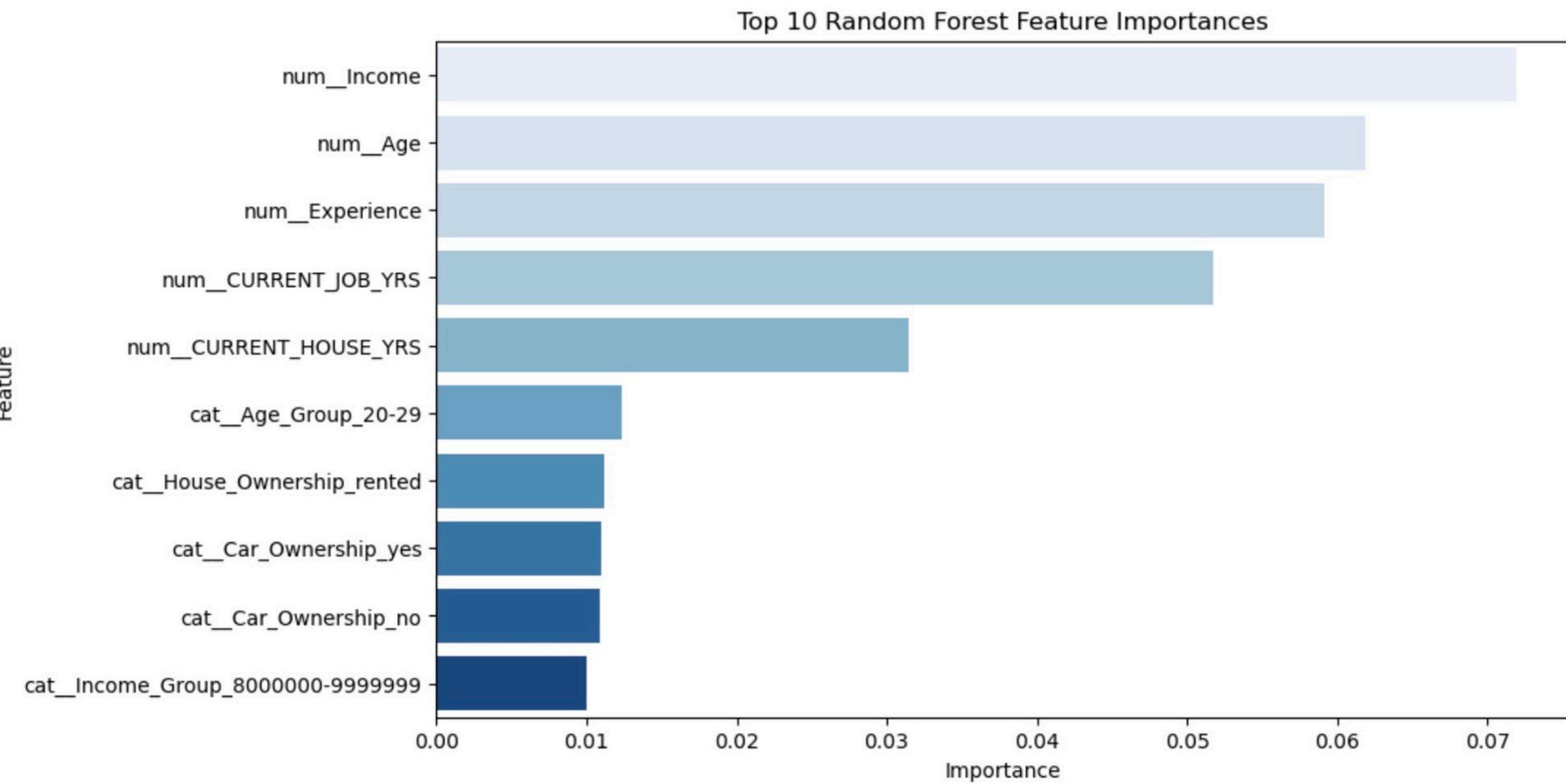
- Model: Random Forest
- Metric: Recall (73%)
- **High-Risk Applicant Detection:** Model effectively identified 73% of high-risk loan applicants
- **Optimized Model Performance:** Proper model tuning ensures our model provides more reliable and accurate predictions

73%



IMPORTANT FEATURES

- Income
- Age
- Experience
- Job years
- House years



RECOMMENDATIONS

- 
- Use the model's insights to improve the screening process, giving high-risk applicants additional scrutiny before approval.

Nº1

- 
- Develop marketing strategies aimed at attracting low-risk applicants by highlighting favorable loan terms and conditions.

Nº2

- 
- Regularly update the predictive model with new data to maintain its accuracy and relevance.

Nº3

FUTURE PROJECT

- Alternative data that can enhance the model's predictive power and provide a more comprehensive risk assessment.

PROJECT 1

- Evaluate the model's performance on loan data from different countries to assess its adaptability and effectiveness in various markets.

PROJECT 2

QUESTIONS

