

Home Credit Default Risk

Group 5:

Dominique Miranda

Jenisha Rawal

Tarun Gulati

Anjan Kumar





Overview

- **Business Problem Statement**
- **Objective**
- **Target vs. Loan Type & Credit Amount**
- **Strong Predictors**
- **Modeling Comparison**
- **Benefits of the Model**
- **Summary**
- **Conclusion**



Business Problem

Home Credit seeks a **homogenous strategy** to utilize alternative data effectively in **assessing** loan repayment **capabilities**, avoiding unnecessary **rejections**. The goal is to empower customers, increase client acceptance, and **boost revenue** by identifying potential **defaulters** through exploratory data analysis of applicant features.

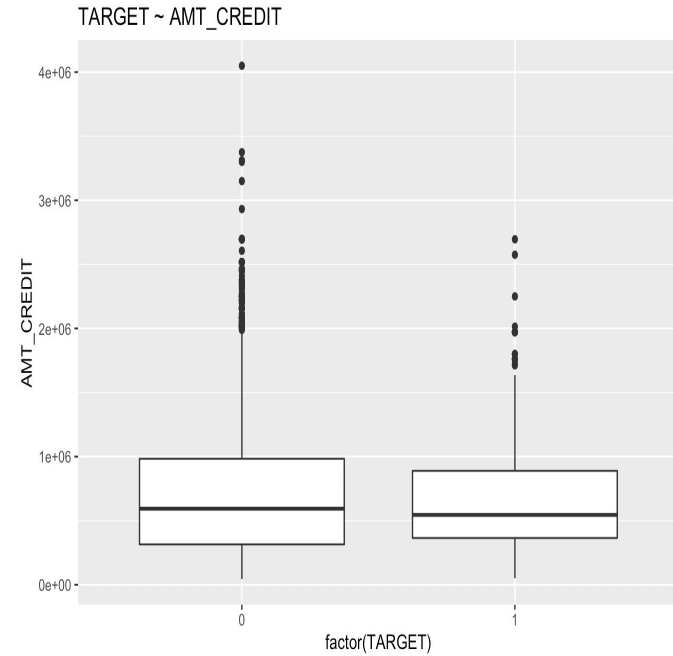
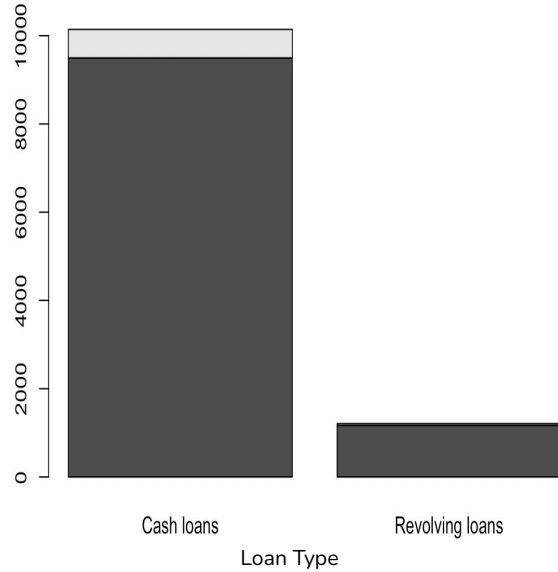


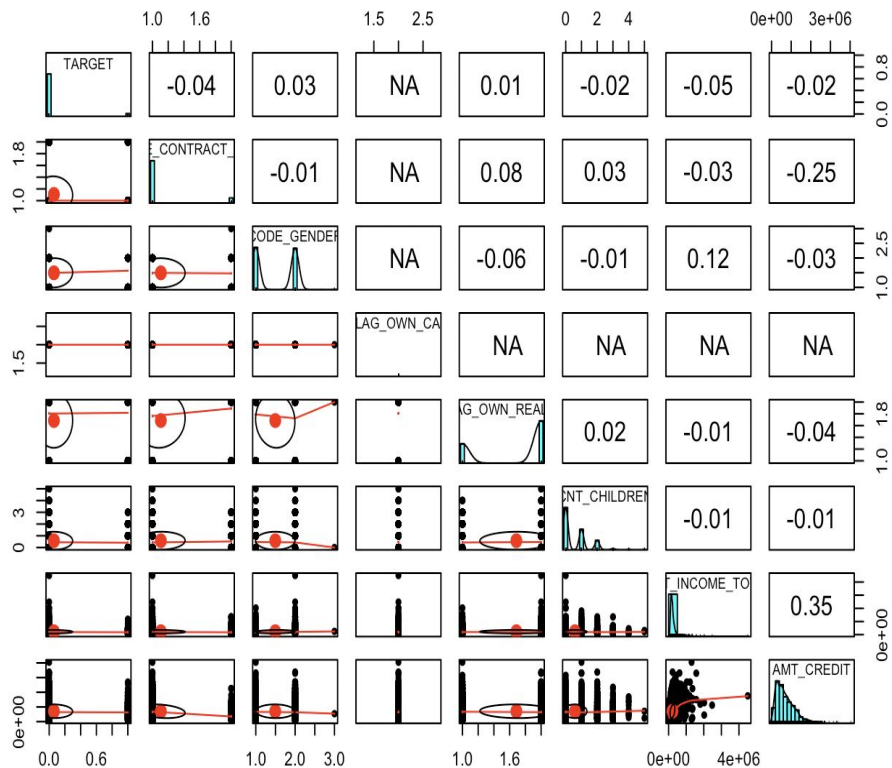
Objective

Develop a **model** to:

- **Reduce** loan application rejections
- **Predict** loan repayment abilities
- Have **safe** borrowing options
- **Identify** loan defaulters
- **Achieve** higher revenue

Target vs Loan Type & Credit Amount



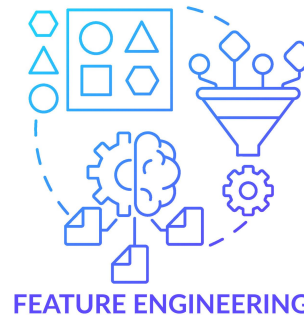


Strong Predictors

- NAME_CONTRACT_TYPE
- AMT_INCOME
- AMT_CREDIT

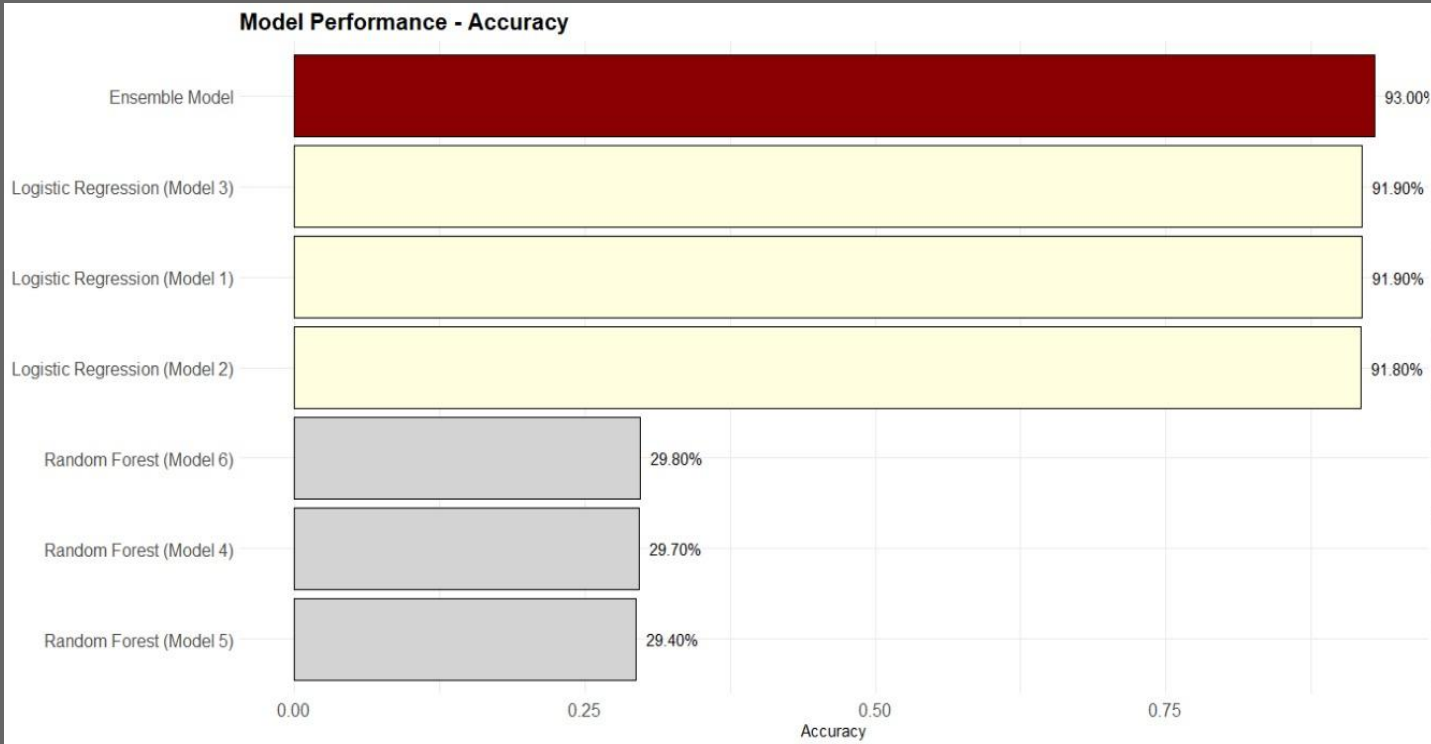
New Features

- **EMPLOYED_MORE_THAN_10_YEARS**
- **DAYS_ID_PUBLISH_SCALED**
- **APARTMENTS_AVG_LOG**
- **OWN_CAR_AGE_BINS**



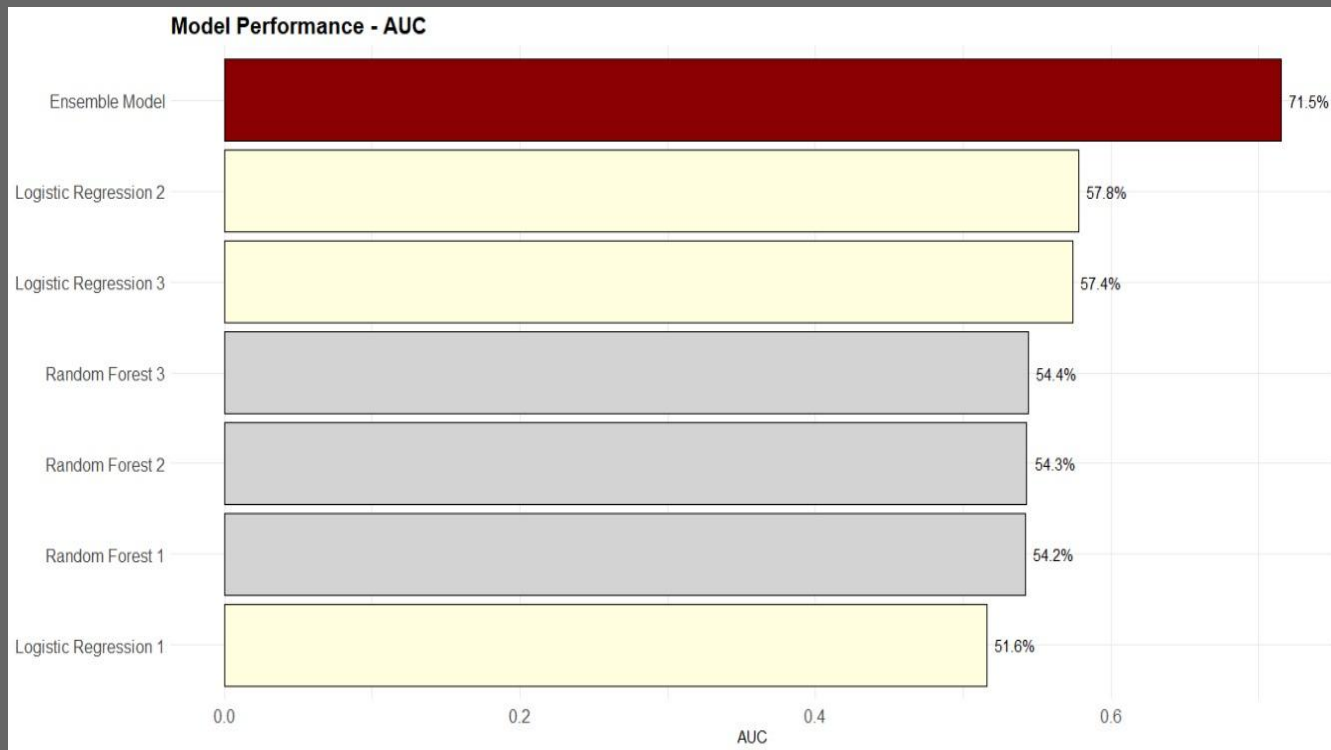
Modeling Comparison

Based on Accuracy



Modeling Comparison

Based on Area Under the Curve (AUC)





Benefits of the Model

- Enhanced **Accuracy**
- Increased **Revenue**
- Efficient **Risk Management**
- Customer **Empowerment**
- Competitive **Advantage**



Conclusion

- Upsampling vs Downsampling
- Combined Ensemble Model
- **Lower Default Probability:**
 - Employed
 - Apartment or House Owner
 - Owns a Car



Questions?