



HOME CREDIT Scorecard Model

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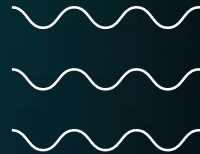
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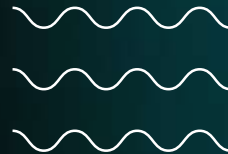
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Problem Research

Home Credit Group aims to improve financial inclusion by offering a safe and positive borrowing experience to those with limited credit histories. They use alternative data sources like telecommunications and transactions to **assess clients repayment abilities**. Home Credit enhance their data analysis methods, ensuring that deserving clients receive loans tailored for their success and avoiding rejection based on incomplete credit histories.



Objective



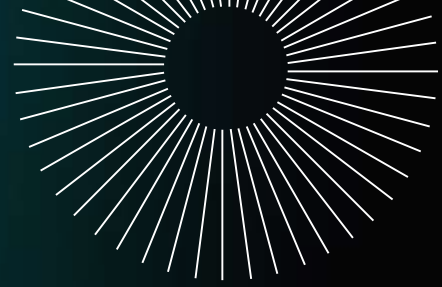
Analyze the characteristics of clients who apply for loans



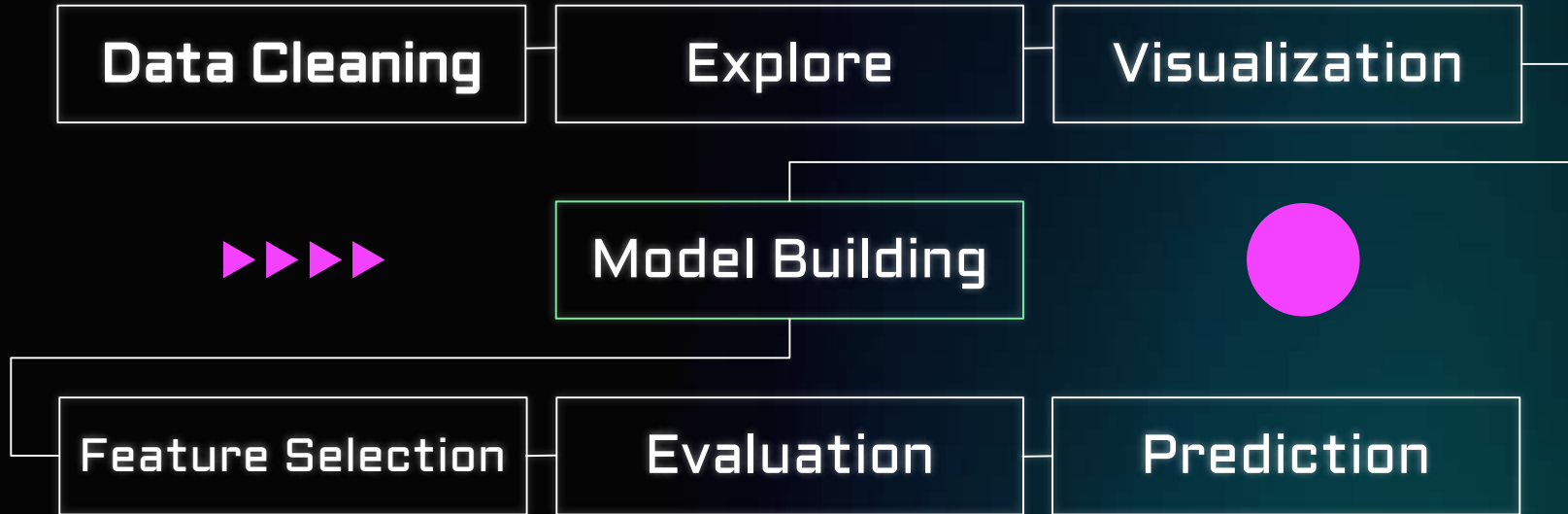
Doing modeling to predict the client's ability to repay loans



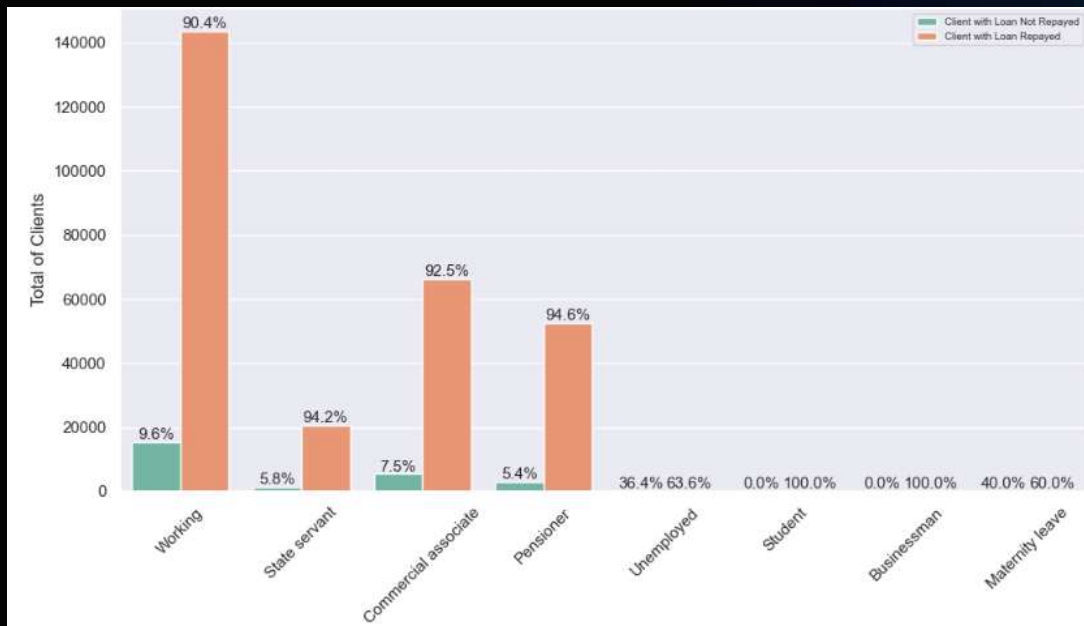
Make business recommendations from the insight



DATA PREPROCESSING

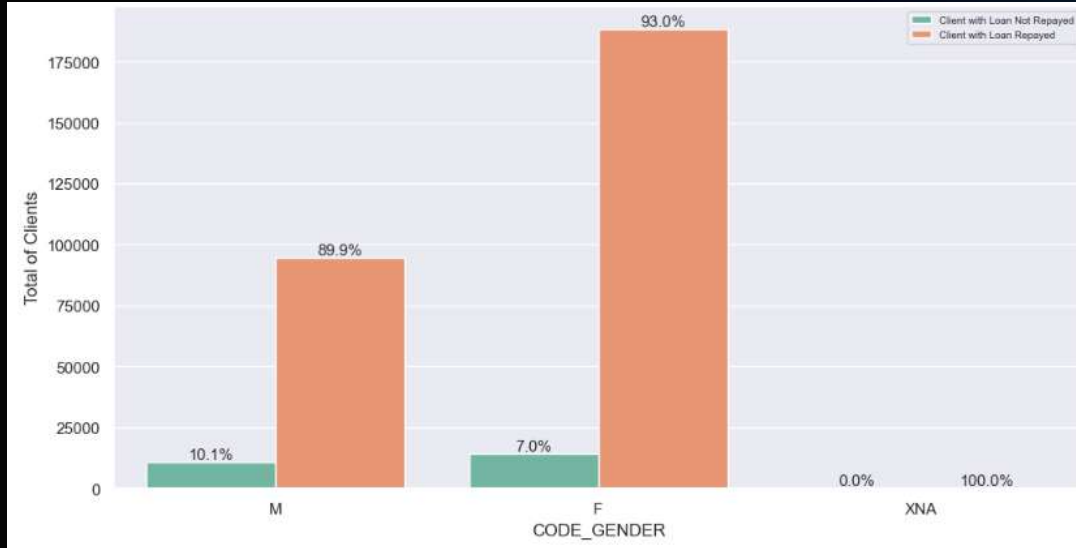


BUSINESS INSIGHT



Clients with income from **maternity leaves** and those who are **unemployed** have the largest percentage (around 40% and 36%) having problems paying loans.

BUSINESS INSIGHT



Women apply for loans more than men. However, **men are more have difficulty paying loans** (around 10%) compared to women (around 7%).

Launch a targeted **financial education and support program** specifically tailored for male clients. This program should focus on enhancing financial literacy, budgeting skills, and debt management.

MACHINE LEARNING

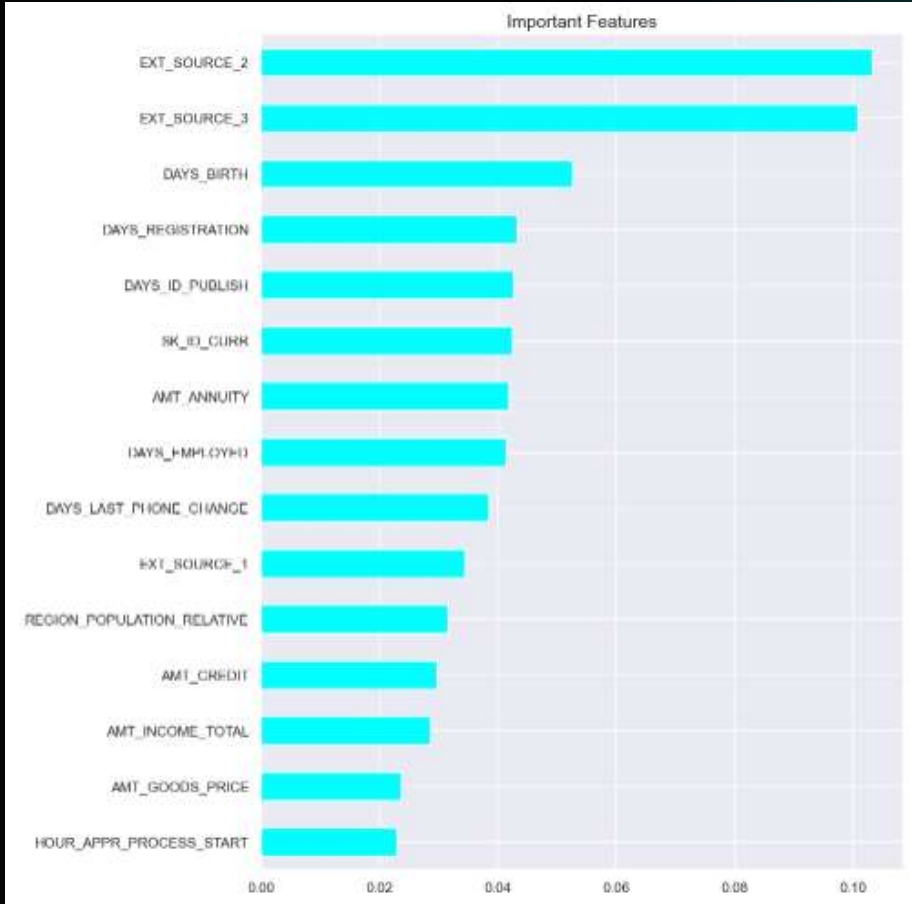


ML Algorithm	Testing Accuracy Score
Logistic Regression	65%
Decision Tree	76%
Random Forest	95%

Based on the three building models above, **random forest** was chosen as the best model for predicting client's repayment abilities, with 95% testing accuracy.



Important Features




Most important features from
Random Forest Classifier model are
score from external data source 2,
score from external data source 3,
and client's days birth





RECOMMENDATION

- 
1. Offer financial literacy workshops or counseling for clients with lower education, large families, and irregular income sources.
 2. Develop campaigns to generate interest among businessman, students, and HR Staff to apply for loans.



Link Github Repo

<https://github.com/zorgonlistanto/Home-Credit-Model.git>