Waze User Churn Project

Machine Learning Model Building

Overview

The data team at Waze has been tasked to create a machine learning model to accurately predict user churn and the factors that lead to such. Company leadership aims to reduce user churn, improve customer retention and accelerate business growth.

Objective

Create a random forest model and XGBoost model, evaluate these two models to select a champion model and evaluate the champion model on test data.

Results

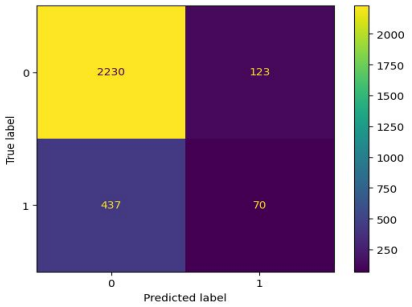
Evaluation metric scores for both model undesirable.

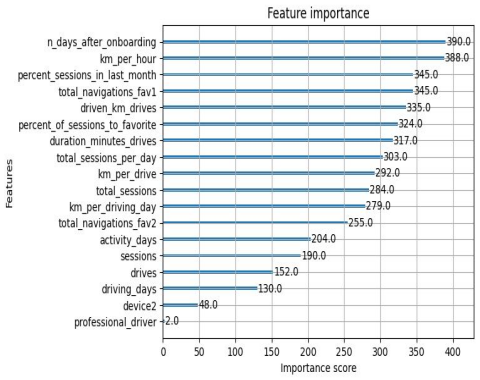
Validation recall score: random forest model (5.52%), XGBoost model (12.23%).

XGBoost model selected as champion model.

XGBoost model recall score on test data (13.81%)

Top 5 most important features: n_days_after_onboarding, km_per_hour, percent_sessions_in_last_month, total_navigations_fav1, driven_km_drives.





Next Steps

1. I don't recommend using the built model due to undesirable metric scores.
2. Model can be improved with feature engineering and hyperparameter tuning.
3. Investigate top 5 most important features identified by the model.