CUSTOMER BANK CHURN

BY: ASTEWAY KEBEDE

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Banking Institution

Increase Customer Retention

Model

Using a Classification model

Banks

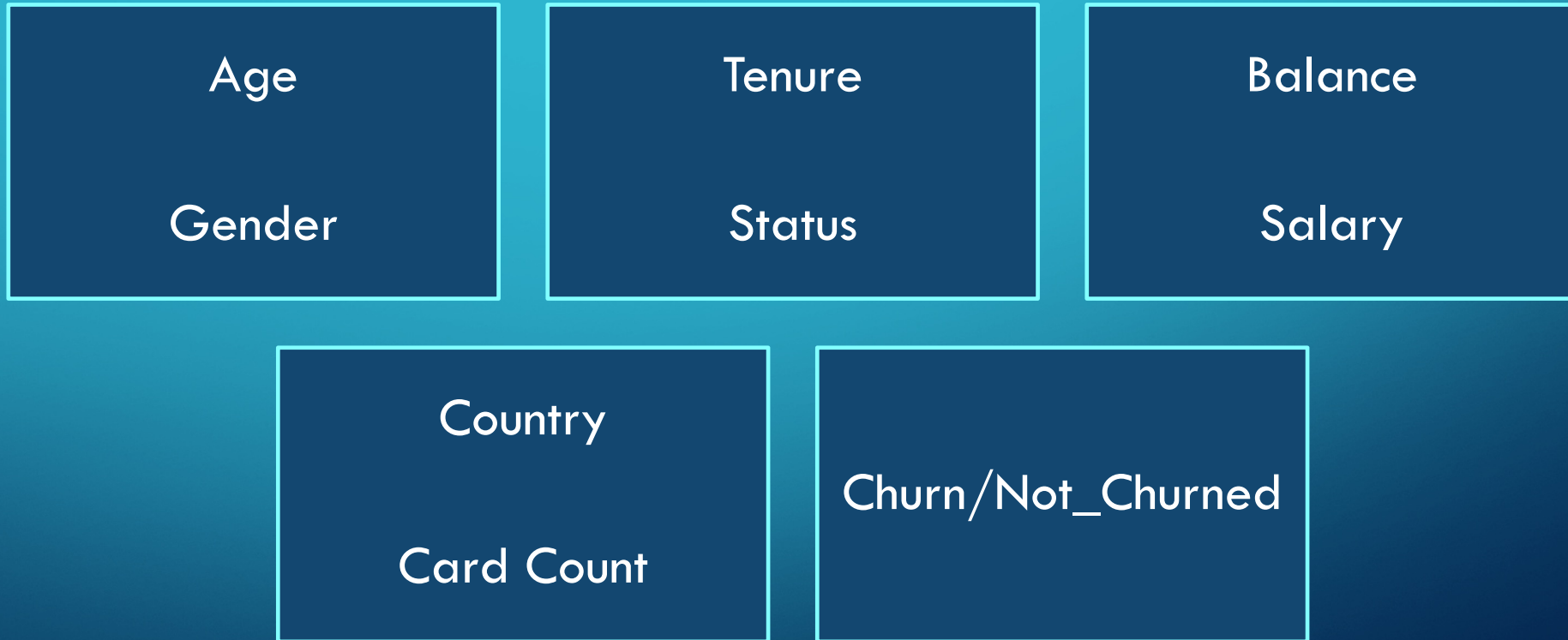Can understand their customers better & Increase Customer Retention

PROCESS & TOOLS
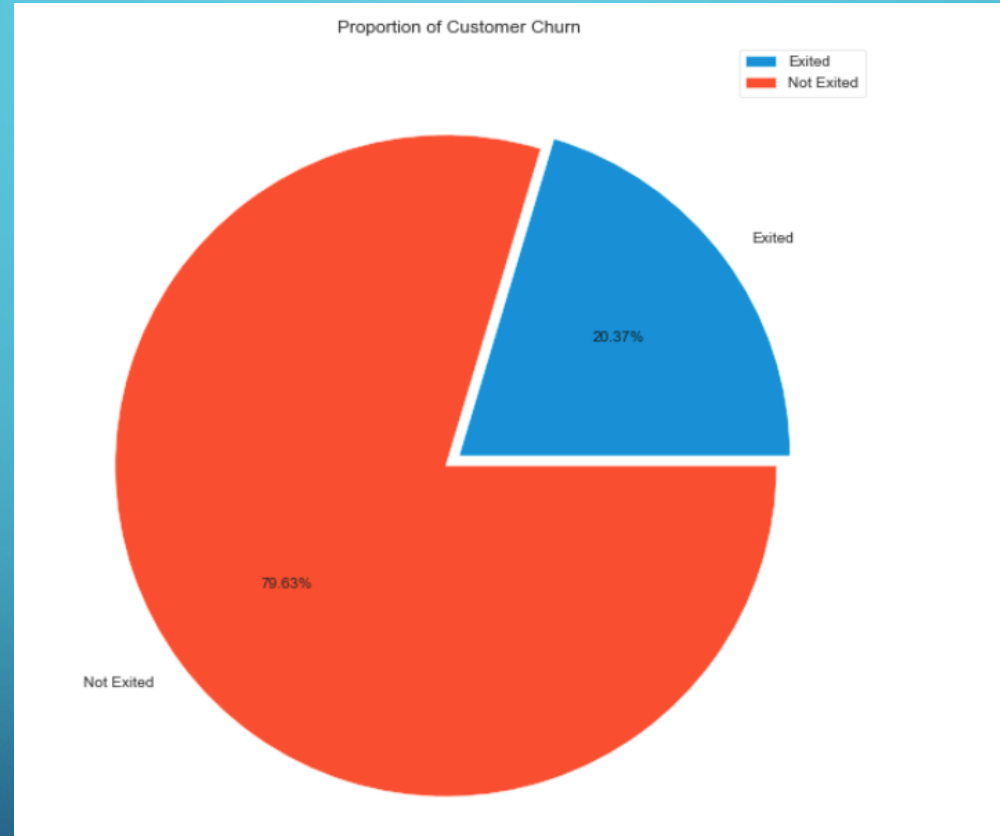
Exploratory Data Analysis

Feature Engineering

Modeling

THE DATA

Age

Gender

Tenure

Status

Balance

Salary

Country

Card Count

Churn/Not_Churned

TARGET IMBALANCE

Proportion of Customer Churn

Exited
Not Exited

20.37%

Exited

79.63%

Not Exited

MEASURING METRIC

F2-measure

Put more attention on minimizing false negatives than minimizing false positives

FEATURE ENGINEERING

Credit Score to categorical Dummy Variables

Interaction Terms

MODEL RESULTS

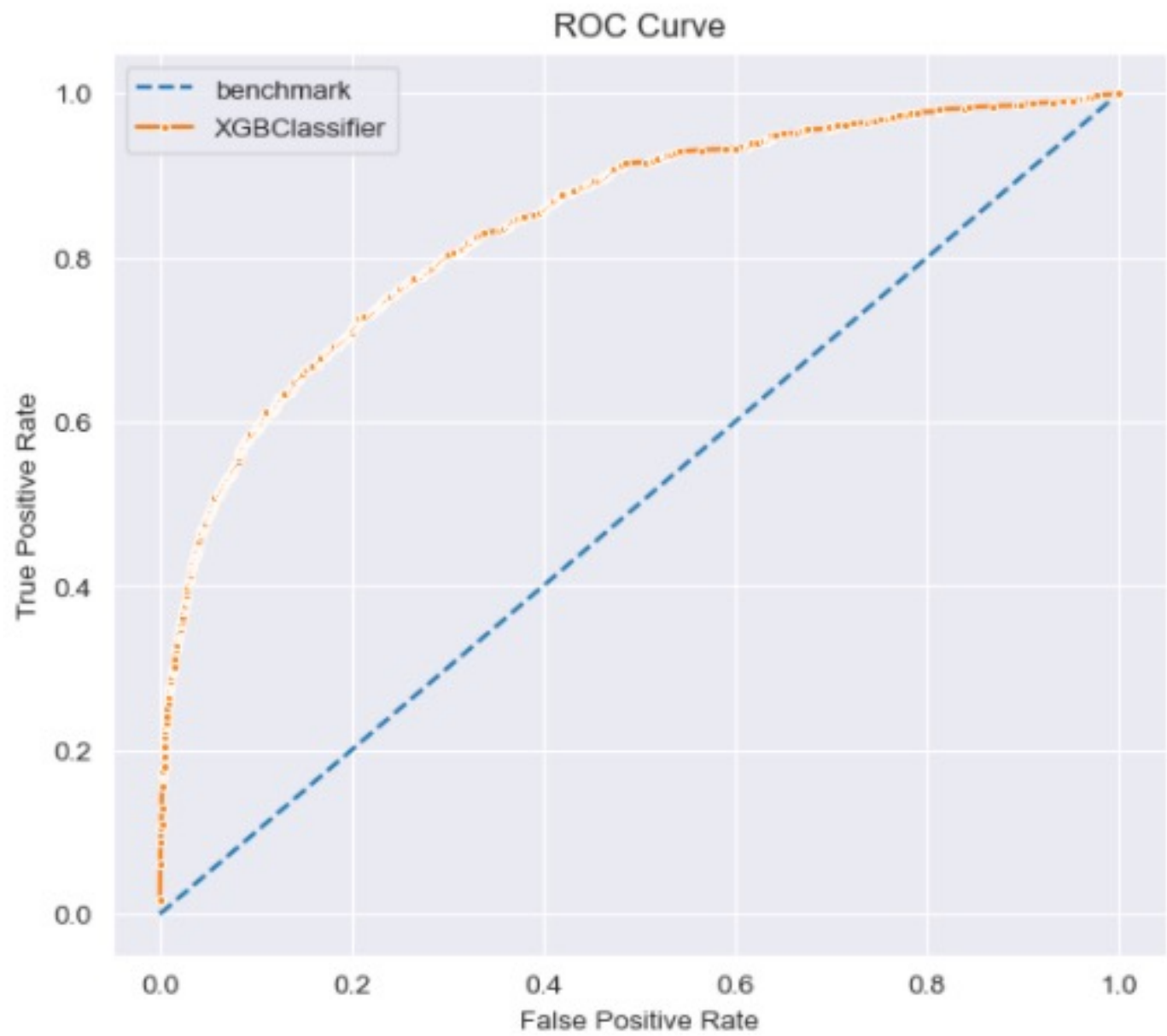| MLA Name	F_Beta 2 Score		
	BaseLine	Modeling	Final
XGB	51.724138	51.308901	52.091555
DecisionTree	51.504771	49.34688	49.85373
GradientBoosting	50.88141	52.953699	49.758584
RandomForest	49.85219	49.009106	49.016967
AdaBoost	50.901379	51.133368	48.946386
Bagging	47.272246	48.370137	48.003174

Importance of Features

ROC Curve
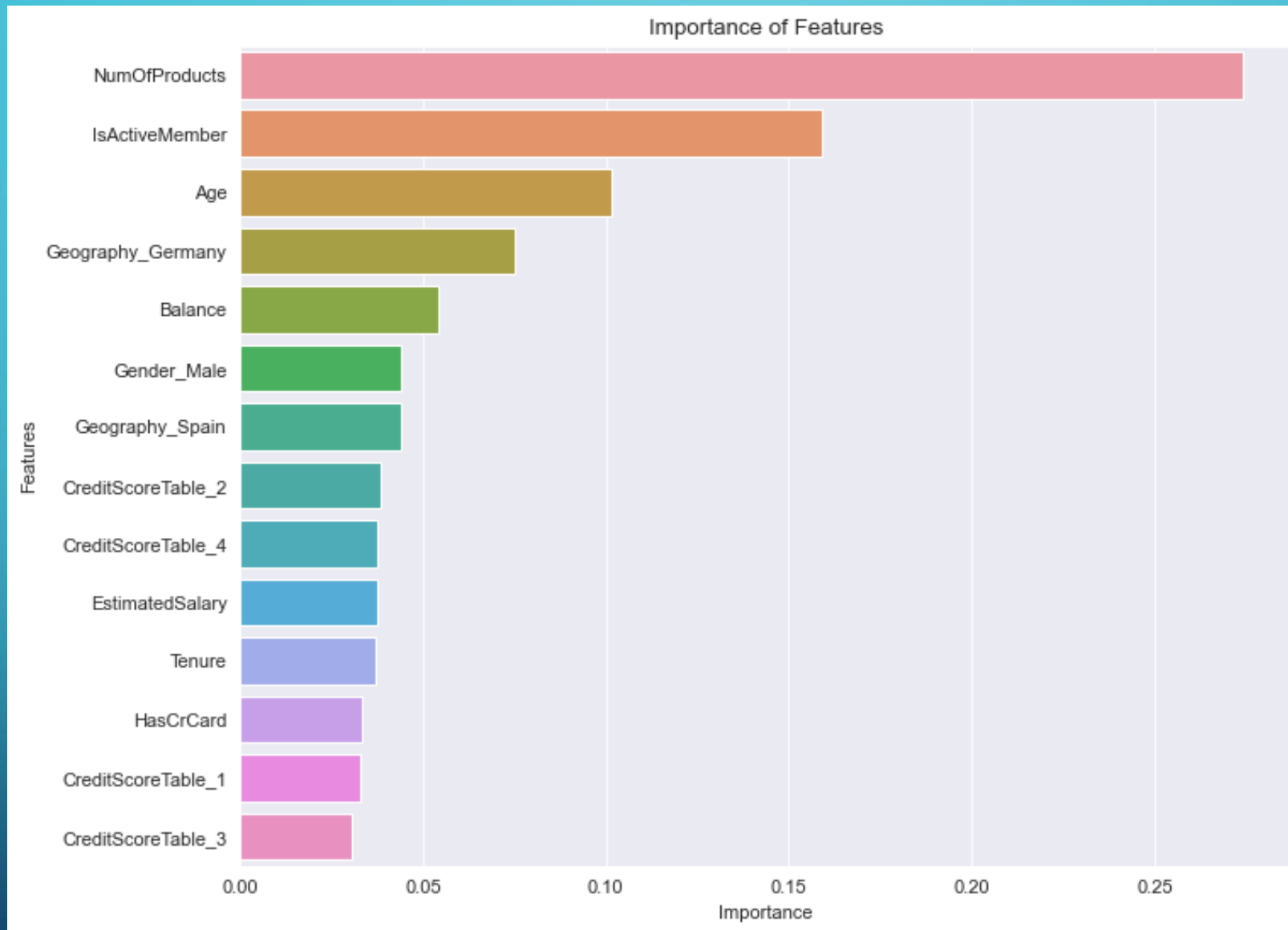
FEATURE WORK

- Additional data

- More Modeling