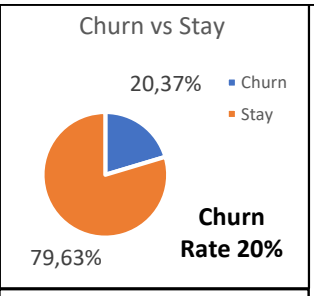
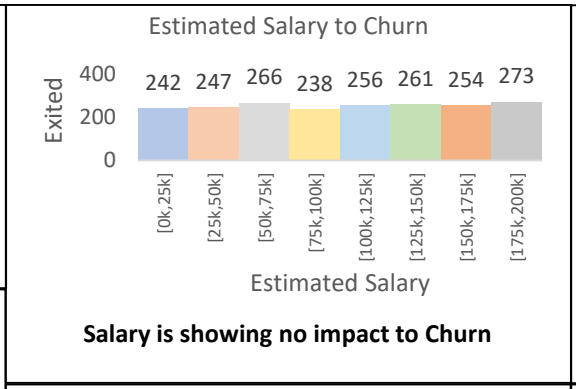
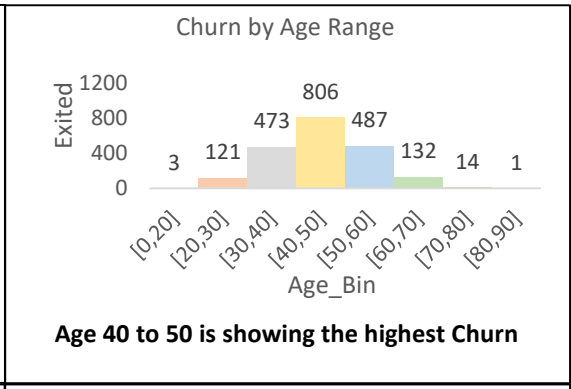
Churn Analytics Dashboard

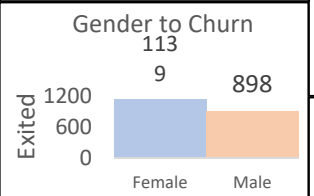




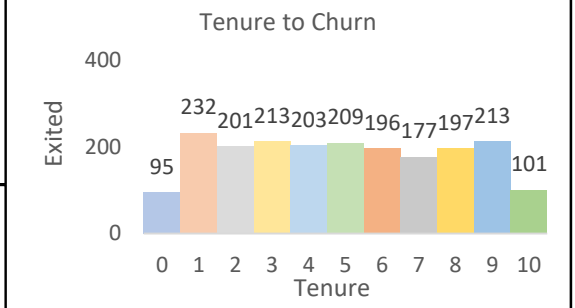
Salary is showing no impact to Churn



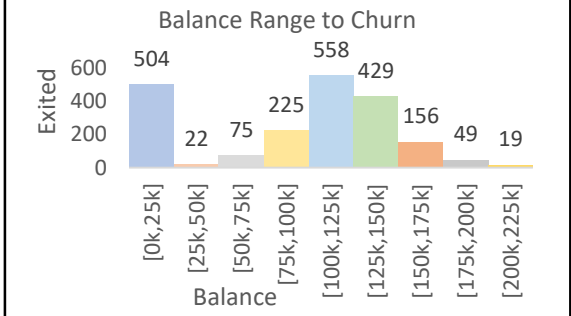
Age 40 to 50 is showing the highest Churn



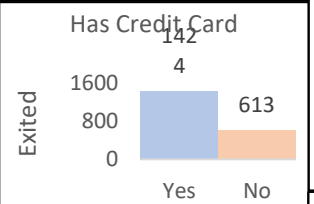
Female Churn > Male's



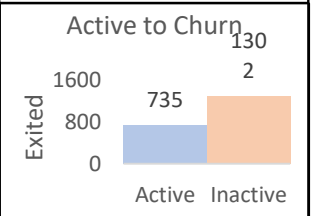
1 year Tenure is showing the highest Churn



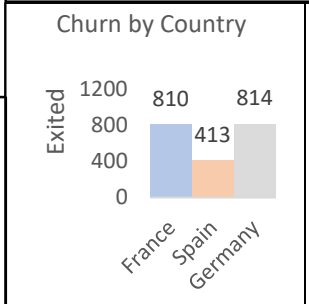
125k – 150k is showing the highest Churn



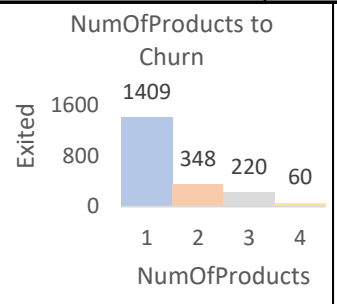
Cr Card Holders Churn > No Cr Card holder's



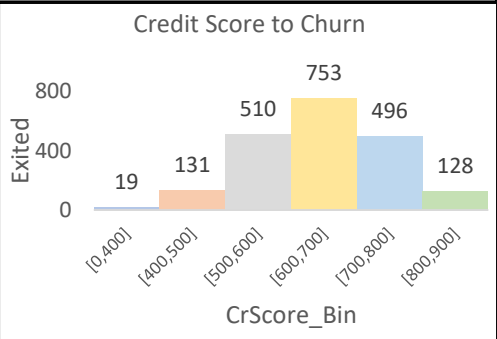
Inactive client Churn > Active's



France & Germany Churn > Spain's



1 product is showing the highest Churn



600 to 700 is showing the highest Churn

PROJECT EXPLANATION

This project was run by Kamboja Team which is consist of four members including me. Project time is one and a half months from early September to mid October 2021.

The goal

To predict the probability of churn for the customer.

What we did

We developed a machine learning algorithm to achieve this goal. The project included the following steps:

- Understanding the business problem
- Exploratory data analysis dan visualization
- Data preparation and transformation
- Model Development and Evaluation

Modeling

Data preparation was run based on insights obtained from exploratory data analysis. We developed machine learning with three models: ANN, SVM-RBF, and XGBoost.

Result

The Accuracy value represents the predicted value of True Negative and True Positive. This means that the number of people who stay (True Stay) and the number who exit (True Exit) can be seen Accuracy.

False Positive represents the number of customers who exit but are still staying (False Exit). We want minimal result for customers who are predicted to Stay but are Exit. So, in addition to Accuracy, we consider the Recall value which can show a False Negative. The smaller the False Negative, the smaller the customer who is predicted to stay, but it turns out to be an exit (False Stay).

Model	Testing Performance			
	Accuracy	Precision	**Recall**	Specificity
ANN	**76.90%**	43.59%	**76.66%**	76.96%
SVM-RBF	**83.30%**	58.67%	**57.21%**	89.86%
XGBoost	**79.05%**	48.55%	**70.65%**	81.16%