PROJECT TITLE: PREDICTING CUSTOMER CHURN FOR SYRIA TEL

NAME: HILDA JEROTICH

COURSE: DSFPT11

PHASE 3

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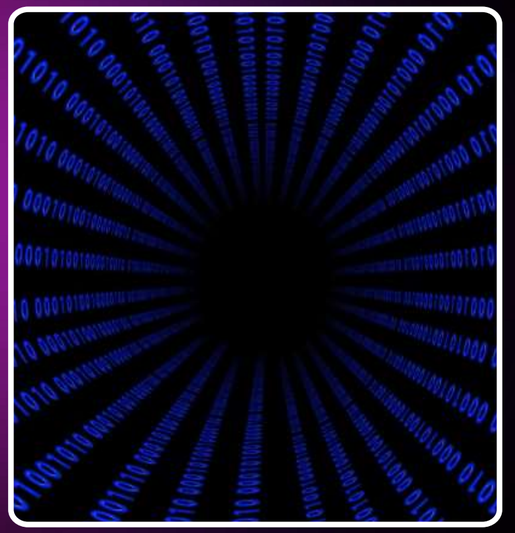


OVERVIEW

Purpose of this Project

❖Syria Tel like many telecom companies, faces the challenge of losing customers unexpectedly; a problem known as customer churn.

❖Retaining customers is more cost effective than acquiring new ones.

❖Our goal is to use historical customer data to predict which customers are most likely to leave, so that the company can take action before it is too late.

What we did

❖Collected and explored Syria Tel customer data.

❖Build a machine learning model to classify customers as likely to churn and not churn.

❖Evaluated the performance of the model.

BUSINESS AND DATA UNDERSTANDING

Why this Matters to Syria Tel

❖Churn directly affects revenue and customer base.

❖If we can identify who is most likely to churn, Syria Tel can offer promotions, improve services or reach out in time.

The Data

❖Contains 21 features.

❖Customer service calls has a high correlation with churn while number of voice mail messages has least correlation with churn.

❖Each customer is labeled as either churn or not churned.

MODELING

How We Built the Prediction Tool

❖We used a technique called classification modeling, which is ideal when we want to predict yes or no outcomes . In this case, will a customer churn or not?

❖Several models were tested, but our best-performing one was a model called XG Boost, which is especially good at finding patterns in complex data.

❖We trained the model using past customer data, allowing it to learn what churners typically look like.

EVALUATION OF THE MODEL

How Well Did Our Model Work?

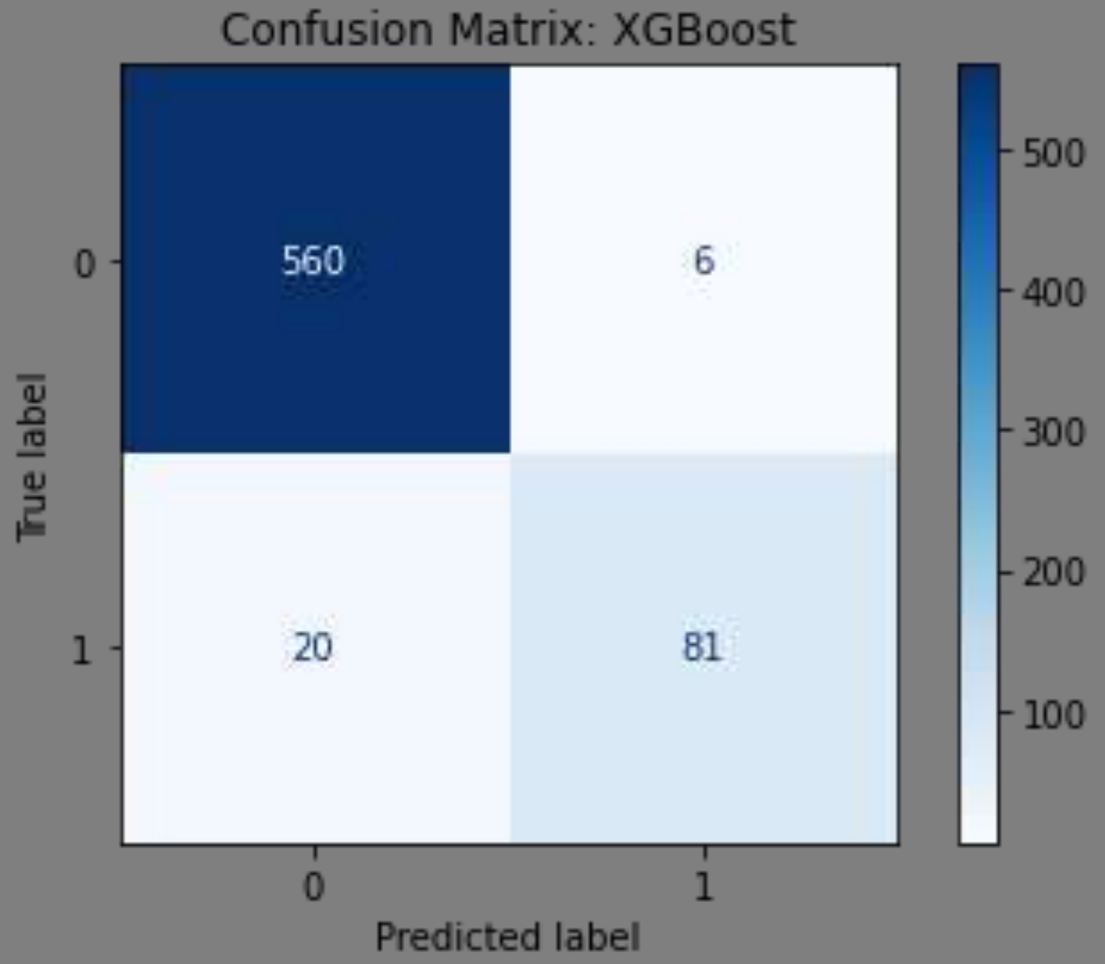
❖We measured the model's performance using three key ideas:

- Accuracy: How many predictions were correct? → 96% accurate
- Recall for churners: How many actual churners we caught? → We caught 80% of them
- Precision for churners: Of those we predicted would churn, how many really did? → 93% were correct

What This Means?

❖The model is both reliable and actionable. It can identify customers at high risk of leaving before they actually do, which gives Syria Tel time to intervene.

CONFUSION MATRIX FOR XGBOOST MODEL



RECOMMENDATIONS

What Syria Tel Should Do

❖Use the model to flag high-risk customers each month and direct retention efforts toward them.

❖Focus on key risk indicators, such as frequent service complaints or short-term contracts.

❖Offer customized incentives (discounts, better plans, or loyalty perks) to at-risk customers before they churn.

NEXT STEPS

How to Take This Further

❖Integrate the model into the company’s systems to automatically score customers in real time.

❖Regularly retrain the model with updated customer data to keep it accurate as behaviors change.

❖Explore personalized interventions based on the top reasons customers leave.

THANK YOU!

- We appreciate your time and interest.
- Questions or feedback? We’re happy to discuss!

BYE!