CUSTOMER CHURN PREDICTION

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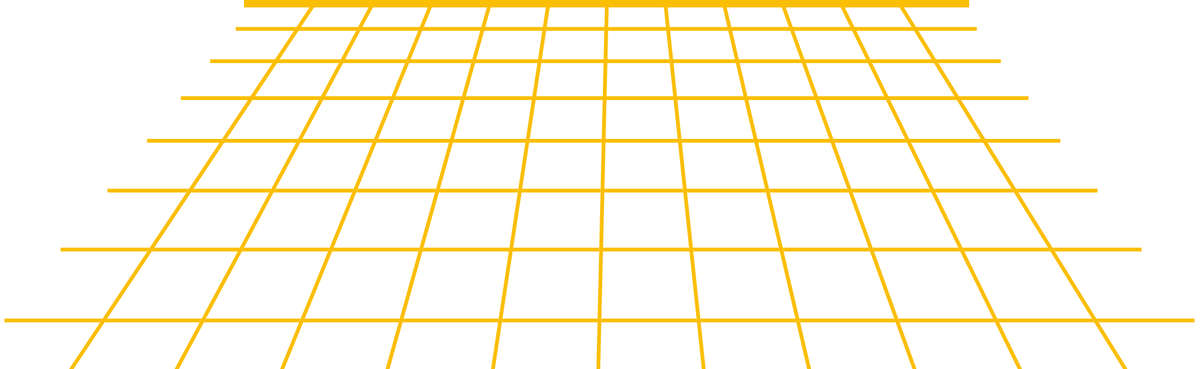

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OVERVIEW

- Every month, the company loses customers, but we don't know why.
- We analyzed past customer behavior to predict who is most likely to leave.
- Goal: Take action early to keep high-risk customers.

BUSINESS PROBLEM

Every month, the telecom company loses customers without a clear reason. By using data on usage patterns and customer support history, we aim to predict which customers are likely to leave — so we can intervene early and improve retention.

BUSINESS UNDERSTANDING

Our Objective :

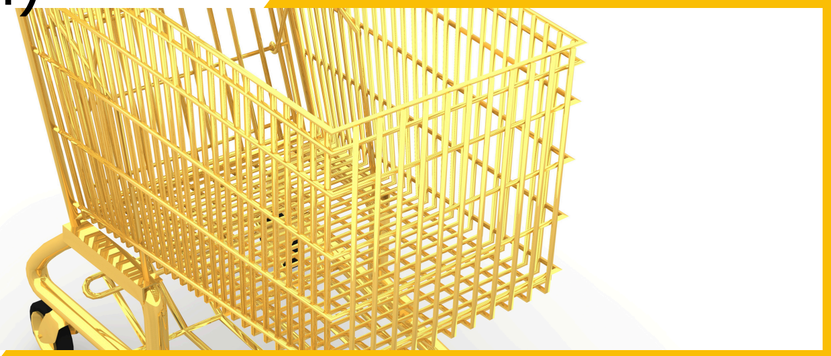
To build a predictive model that identifies customers at high risk of churning (leaving the company), enabling timely interventions such as personalized offers or improved support, with the goal of reducing overall customer churn and protecting company revenue.

DATA UNDERSTANDING

- The dataset contains 3,333 customer records with 21 column
- Features - It includes both categorical and numerical features which are related to customers
- Target Variable - Our variable here is the churn
- Our dataset is from https://www.kaggle.com/becksddf/churn-in-telecoms-dataset

MODEL PERFORMANCE

- The model identifies 83.2% of actual churners (84 out of 101)



- Two models were tested:
- Logistic Regression (simple and interpretable)
- Decision Tree

- We used a method called classification to label customers as "churn" or "no churn"

EVALUATION

The best model identifies 83.2% of actual churners (84 out of 101)

False Alarms: Only 17/100 are incorrect (we'll still retain good customers)

RECOMMENDATIONS AND NEXT STEPS

- Offer personalized support for customers with high customer service calls
- To improve engagement, advertise voice mail plans.
- Pilot Program:
  - Test with 500 high-risk customers next quarter
  - Track: Retention rate, cost savings
- Long-Term:
  - Monthly model updates with new data
  - Expand to predict why customers leave

Thank You

"Thank you for your time and attention