



# *Final Project*

# *Chosen Topic*

Telco Customer Predictive Analysis

## *Reason for topic selection*

Interests in marketing, customer relations, and sales.

# *Questions to answer*

- What is the likelihood of future customer churn?

# *Customer churn definition*

In layman's terms, customer churn is the percentage of customers who have stopped using the company's products and services over a specified amount of time.

# *Benefits of the analysis*

- Marketing optimization
- Operational improvement
- Cost reduction

# *Data exploration*

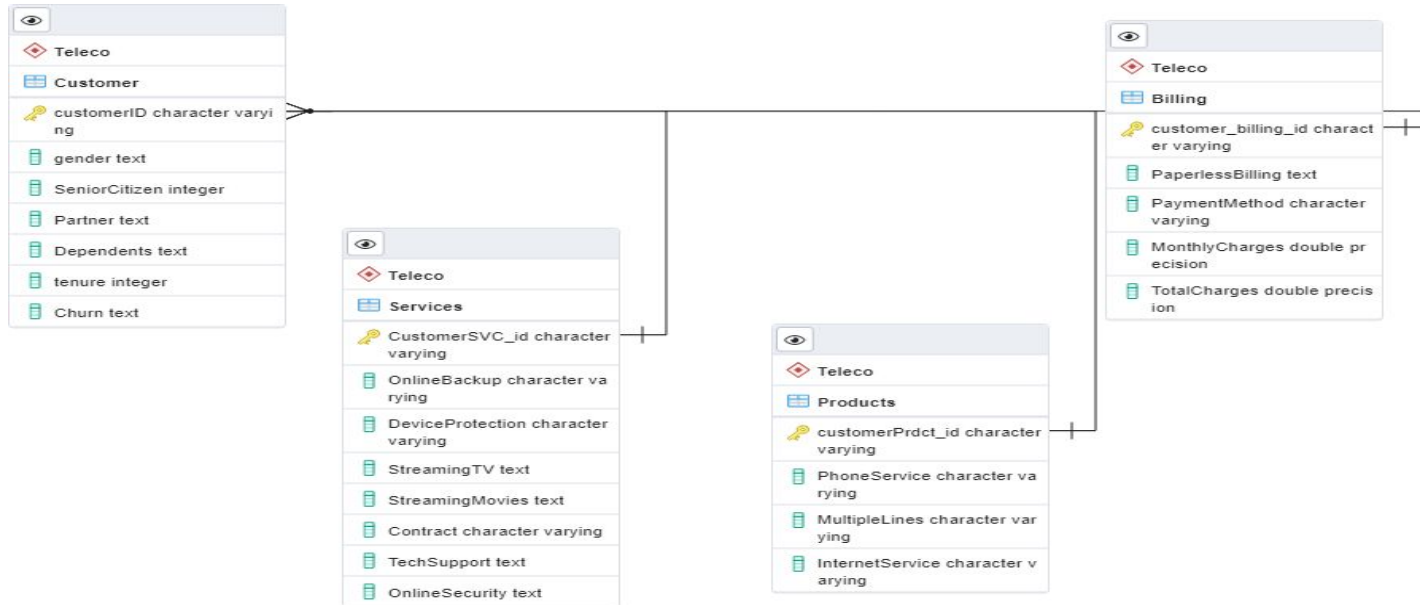
- Variables: Gender, Senior Citizen, Partner, Dependents, Tenure, Phone Service, Multiple Lines, Internet Service, Online Security, Online Backup, Device Protection, Tech Support, Streaming TV, Streaming Movies, Contract, Paperless Billing , Payment Method, Monthly Charges, Total Charges, Churn
- Data types: Objects and Integers
- Response variable: Churn
- Variable transformations: Categorical encoding, conversion of objects to integers

# *Data analysis*

- Models: Logistic Regression, Decision Tree, XGBoost
- Training and Testing sets: split randomly with 70-30 ratio



# Entity Relationship Diagram (ERD)



# *Resources*

- Data Source: [WA\\_Fn-UseC\\_-Telco-Customer-Churn.csv](#)
- Software: Pandas Library, Matplotlib, Numpy, Plotly, PostgreSQL, Python, Scikitlearn, Sqlalchemy, Tableau

# *Communication protocol*

- Team members only communication channels: SMS messages, Slack, Zoom
- Project management tool: Jira
- Contact information shared: individual mobile phone numbers and email addresses
- Regularly scheduled meetings