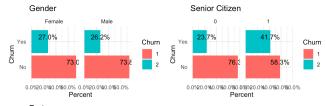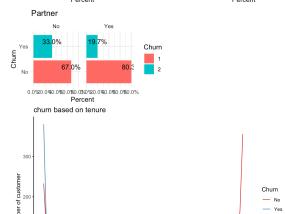# Telco Customer Churn Analysis

Introduction

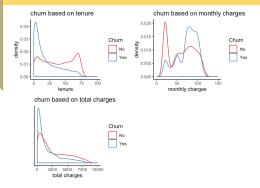**Dataset:** https://www.kaggle.com/blastchar/telco-customer-churn

- Customer churn occurs when customers stop doing the business with a company or stop using a company`s service

- By conducting exploratory analysis on the churn data, we can help the company understand customer behaviors and help identify strategies for improvement

- The development of machine learning algorithm helps company uncover key features which signal the risk and timing of customer churn
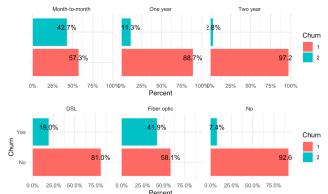
Exploratory Analysis

- **Density plot and correlation plot for numerical features**
- **Churn customers** is a tendency of **Paperless billing;** Payment via **Electronic Check; Month-to-Month** Contract ; **Fibre Optic medium** of Internet Service;

Decision Tree Model For Churn Prediction

- Split the dataset into training data and testing data; p=0.8
- Training data for making model; Use rpart.plot function for presenting the trees
- Testing data for validation; **Accuracy is 0.79**
- Visualize ROC curve for the model; **AUC is 0.80**