Verizon

About Company:

Verizon Communications Inc., commonly known as Verizon, is an American multinational telecommunications conglomerate and a corporate component of the Dow Jones Industrial Average. The company is headquartered at 1095 Avenue of the Americas in Midtown Manhattan, New York City, but is incorporated in Delaware.

Verizon's mobile network is the largest wireless carrier in the United States, with 120.9 million subscribers as of the end of Q4 2020

Business Problem:

Consumers purchasing cell phones on a contract basis is an integral part of Verizon business. This can carry risks and the company would like to identify customers who fail to complete their payments. As the company continues to grow its base and attract new customers, it is important to identify which customers have a higher chance of defaulting. Verizon has been collecting data of customers who bought mobile phones on contracts in order to keep track of who defaults. Your team has been tasked to look at historical data of customers including age, gender, usage, months due, down payment, etc. and whether they defaulted or continue making payments and come up with a machine learning solution that can be used to predict future defaulting.

Contribution to Business Strategy:

- Risk analysis
- Customer attrition
- Maximize profit
- Customer targeting

Priority:

Highest

Stakeholders:

Head of Sales and Retention

Success Metrics:

Successfully predict if a customer will default

Risks:

Consider risks associated with false positives and false negatives:
False Positive: The business does not want to turn down a customer who is able to make their payments
False Negative: The business does not want to sell a contracted phone to a customer who does not fulfill their financial obligations

Value Estimation:

Calculate the value estimation of doing this project

Front End (Final Deliverable)
Build a front end for the model for the final deliverable.

A front-end where a customer who walks into the store will be asked to enter their details (the features of the model). Click a button to run the model and obtain its prediction which can then be used to decide whether or not to give the customer a contract.

Features:
- Year: Year of sale
- Month: Month of sale
- Day: Day of sale
- Price: Total cost for buying phone
- Downpmt: Amount paid upfront
- Monthdue: Total number of months after which remaining amount is due
- Payment_left: amount due after downpayment
- Monthly_payment: amount to be paid every month
- Pmttype: Different payment options (1: Credit payments, 5: Cash Payments, 4: Debit payments, 3: Store gift card)
- Credit_score
- Gender: (1:Male, 2:Female)
- Default: (0: Does not default, defaults)