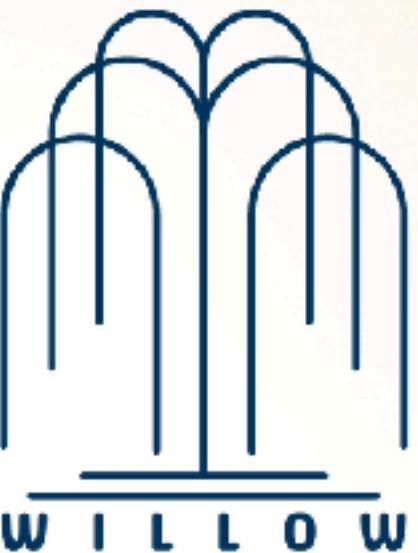




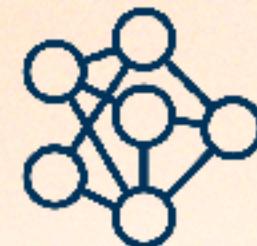
CHURN ANALYSIS

Customer Retention Marketing
Information Presentation Deck



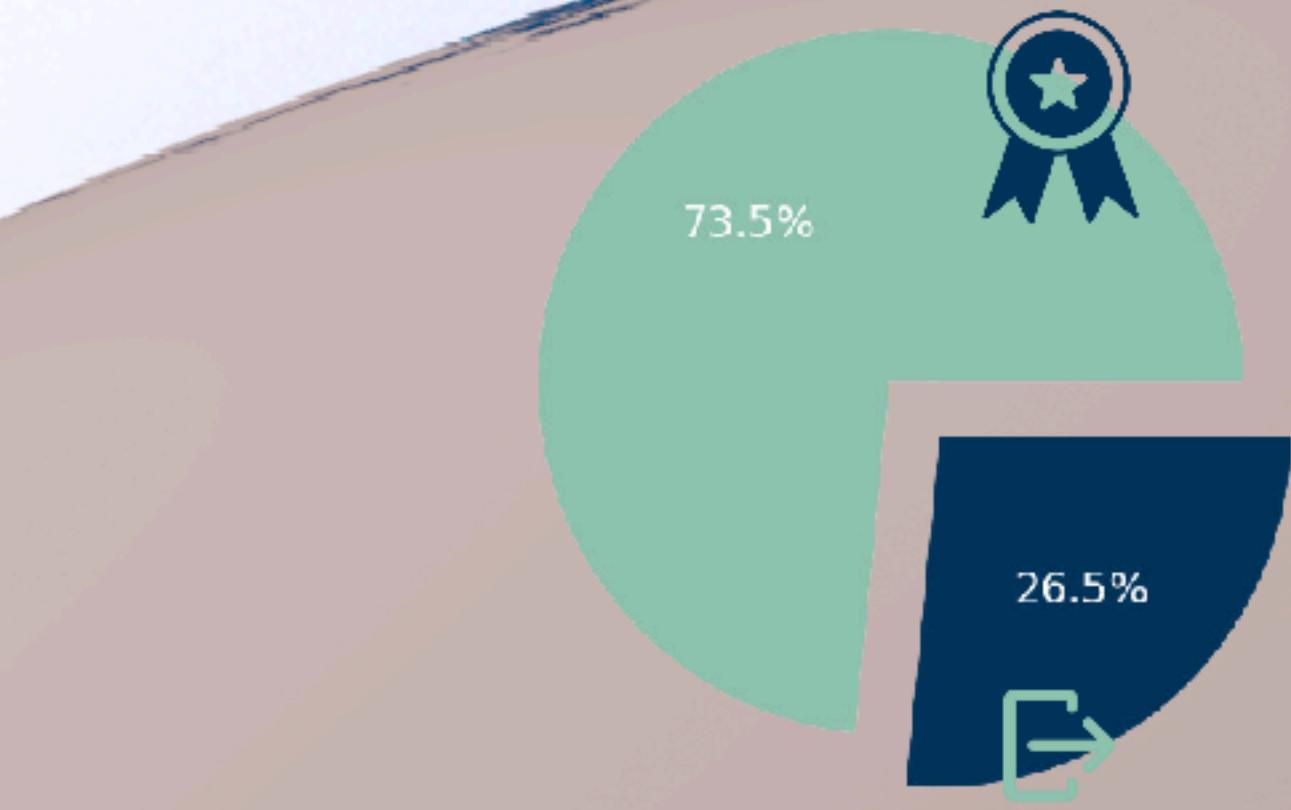
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Fátima González
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CONTENTS

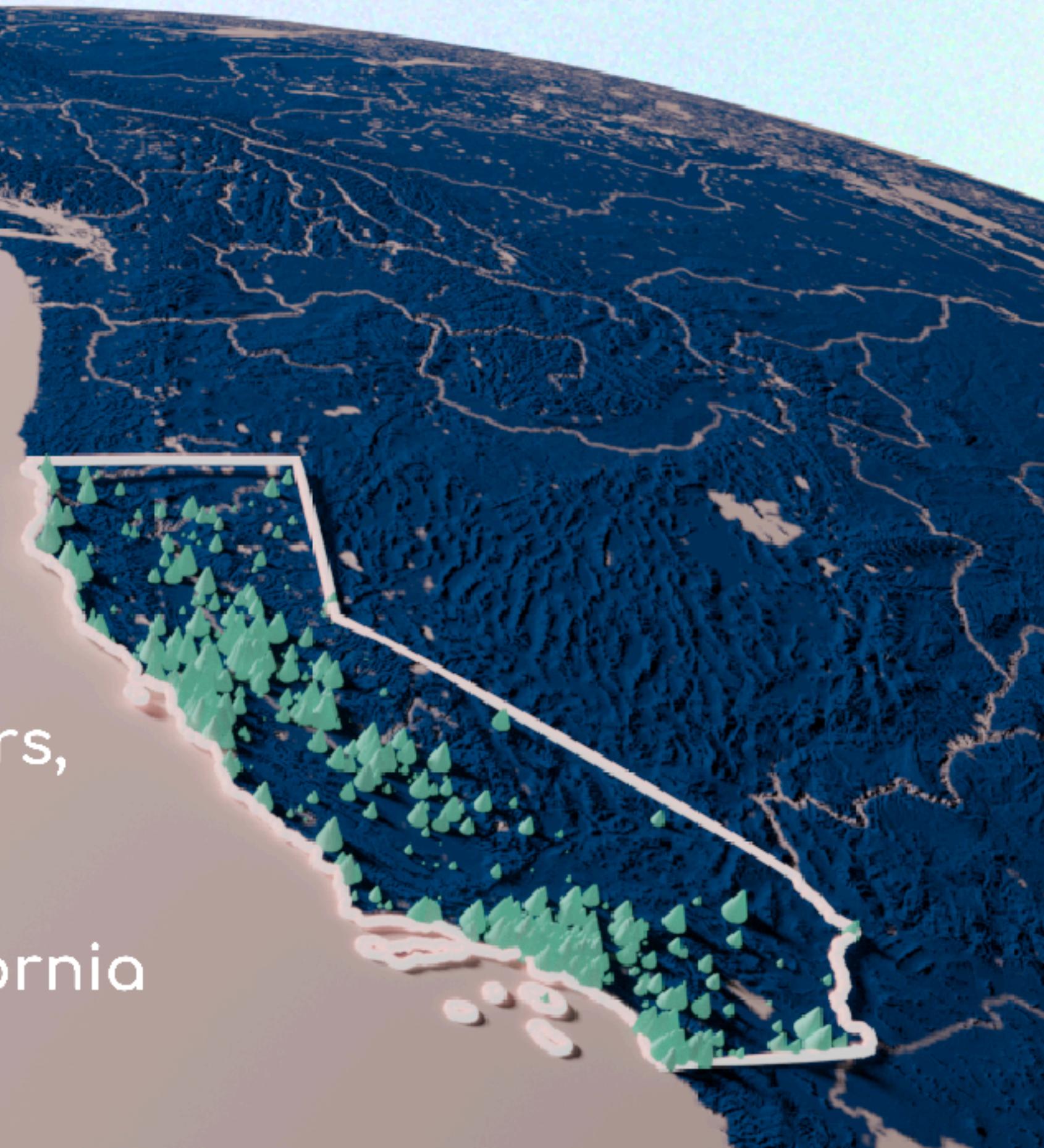


- Demographics: Churner vs Loyal Customer
- Churn Reasons
- Prediction of Churning Rate
- 500 Mailers 
- Score for Churn Risk 

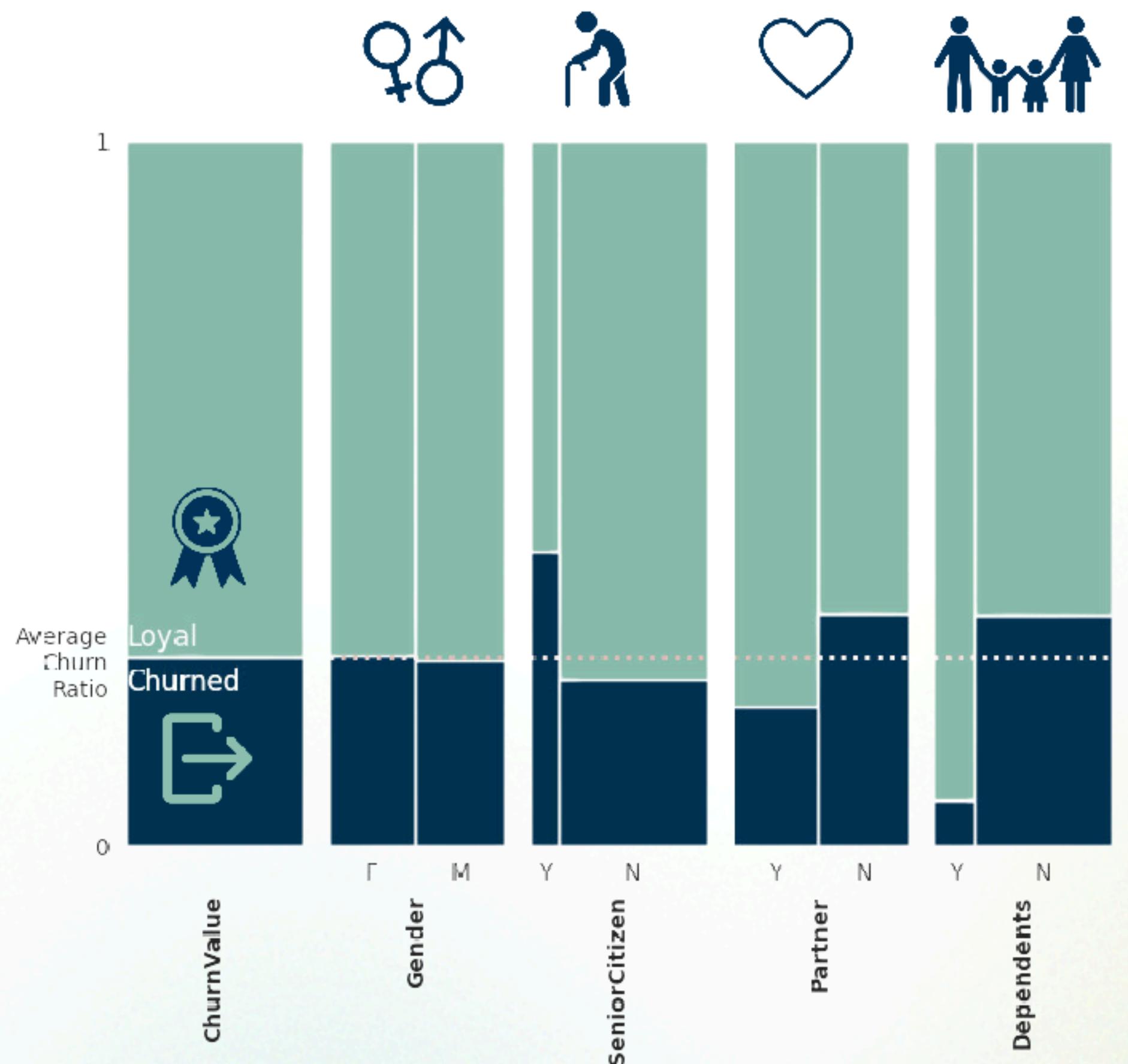
DEMOGRAPHICS OVERVIEW



- The data consists of 7,043 customers, among which 26.5% have churned
- Customers are spread across California



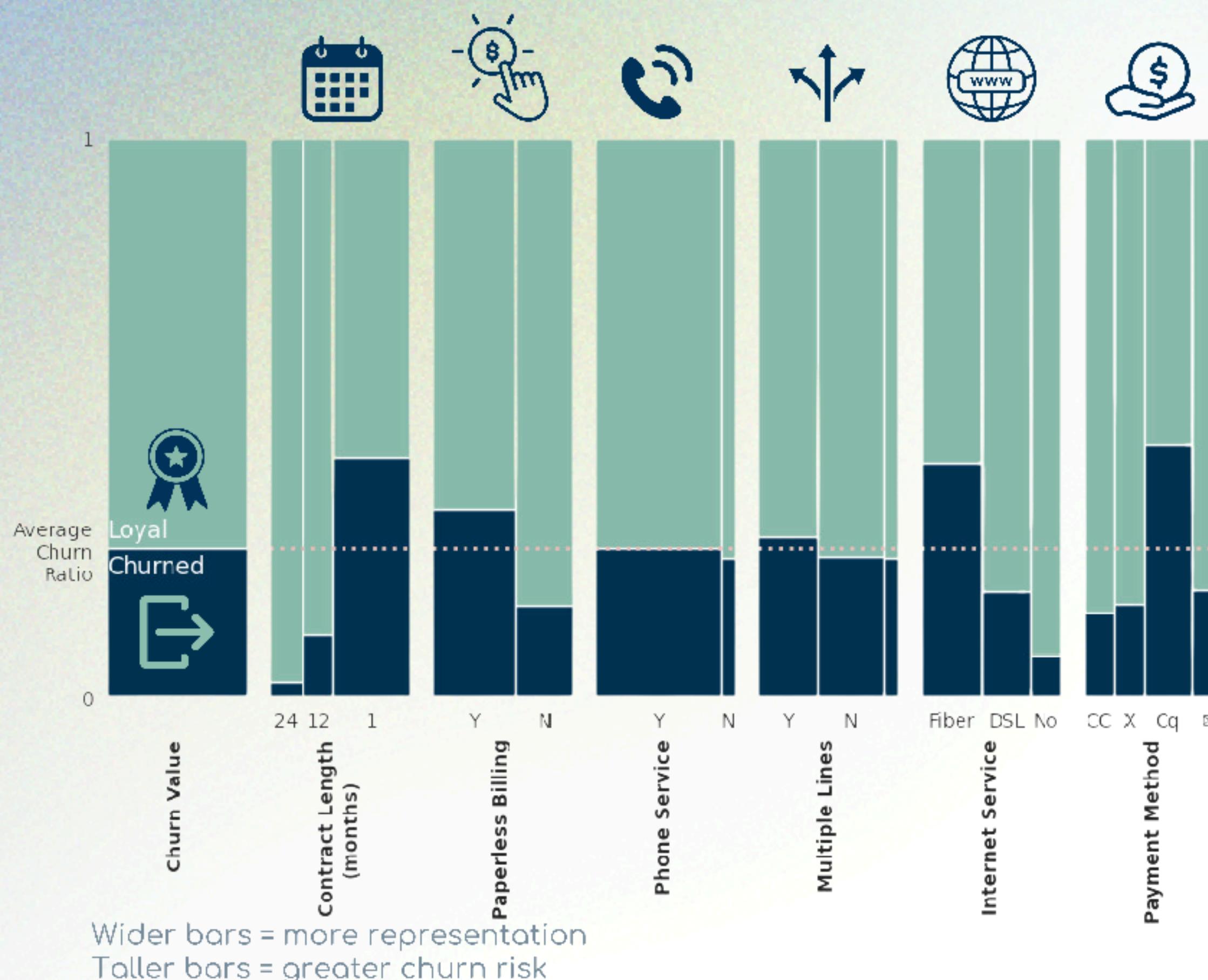
CHURNER DEMOGRAPHICS



Wider bars = more representation
Taller bars = greater churn risk

- Customers without a partner are more likely to churn
- The majority of customers do not have dependents. However, those who do have dependents are less likely to churn
- Senior citizens represent a smaller proportion of the dataset, they are more likely to churn
- Customers of each gender have an equal risk of churning
- The majority of the customers are non-senior and do not have dependents

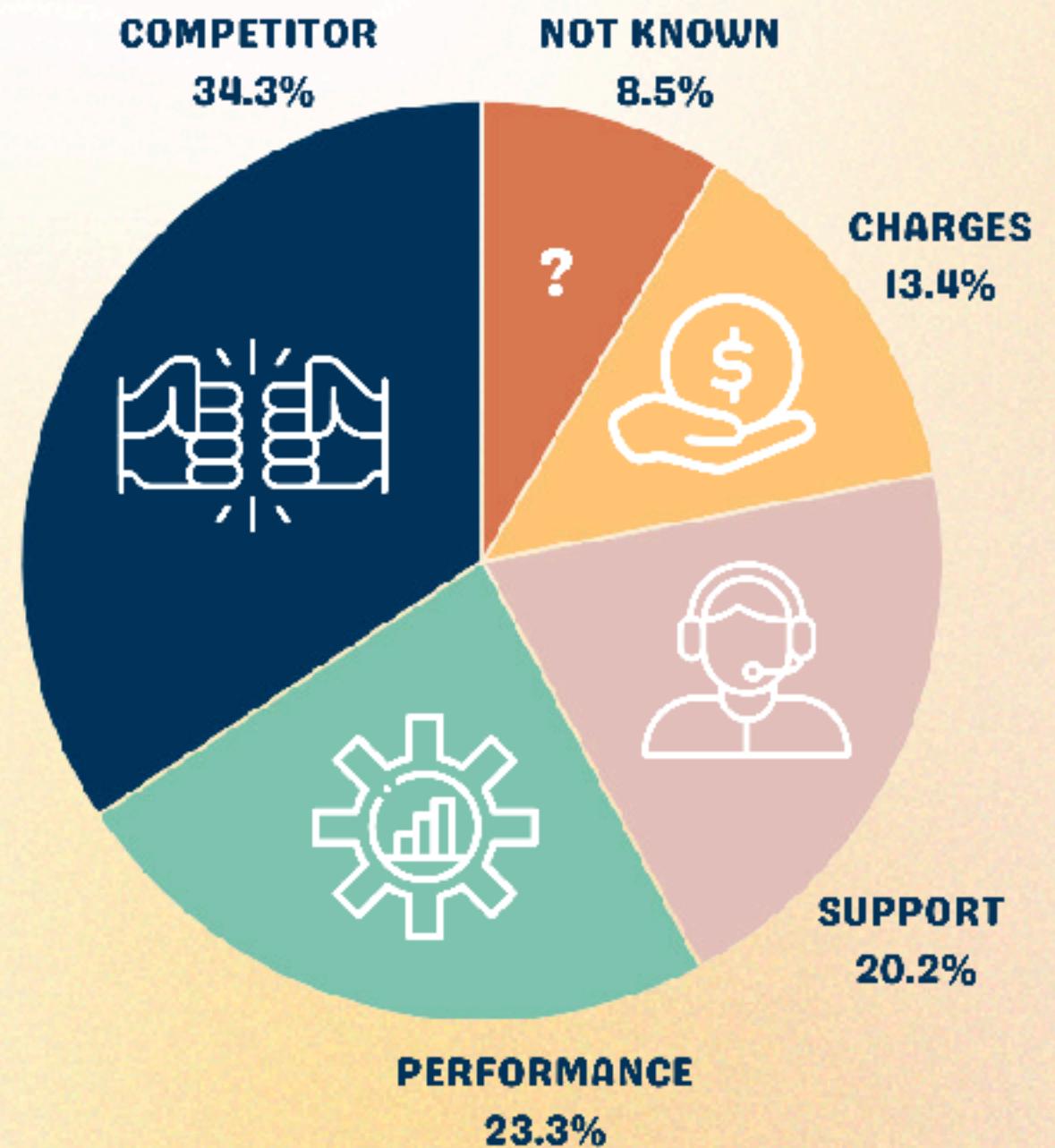
CHURNERS SERVICES



- The majority of customers have month-to-month contracts, which is associated with the highest risk of churning. Conversely, customers with 2-year contracts are less likely to churn
- Customers who have opted for paperless billing are more likely to churn
- Customers with fiber optic internet service are more likely to churn, while customers with DSL or no internet service are less likely to churn
- Those who pay by electronic cheque (Cq) are more likely to churn when compared to payment with credit card (CC), electronic transfer (X) and mail cheque (✉️)

CHURN REASONS

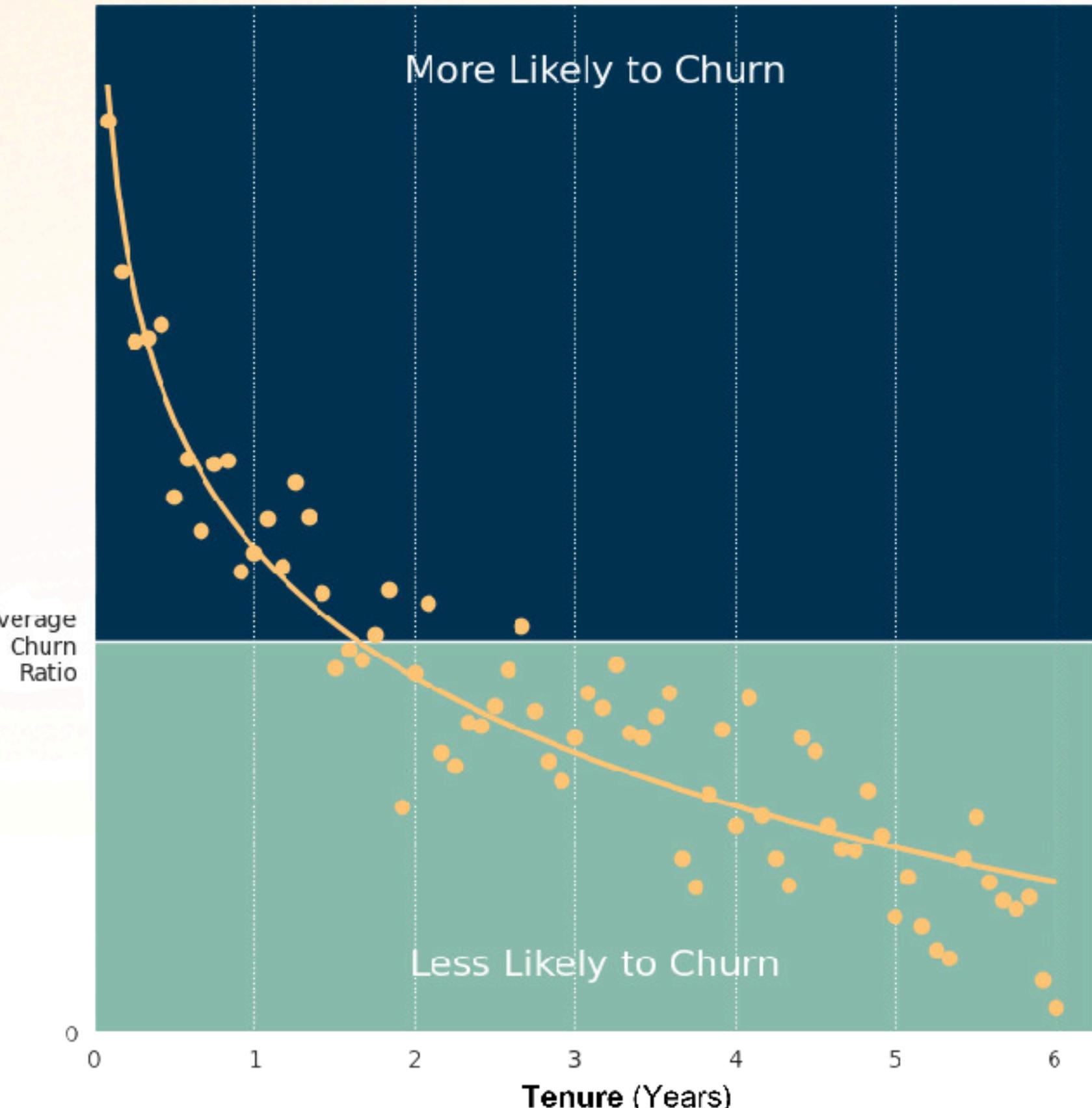
competitor made data competitor
offer price moved moved website network
competitor offered
self service limited range reliability limited download upload support poor
devices competitor higher download know better
network reliability services lack charges price better devices product dissatisfaction
data charges know service dissatisfaction made better affordable download
high product long distance offer competitor
long distance phone support extra data reliability network speed long
offered higher dissatisfaction service
support person person attitude provider attitude
better offer dissatisfaction lack poor expertise
service provider download speeds upload speed



The most frequently observed reasons for leaving among churner's reviews are competitor offers and dissatisfaction with support and performance

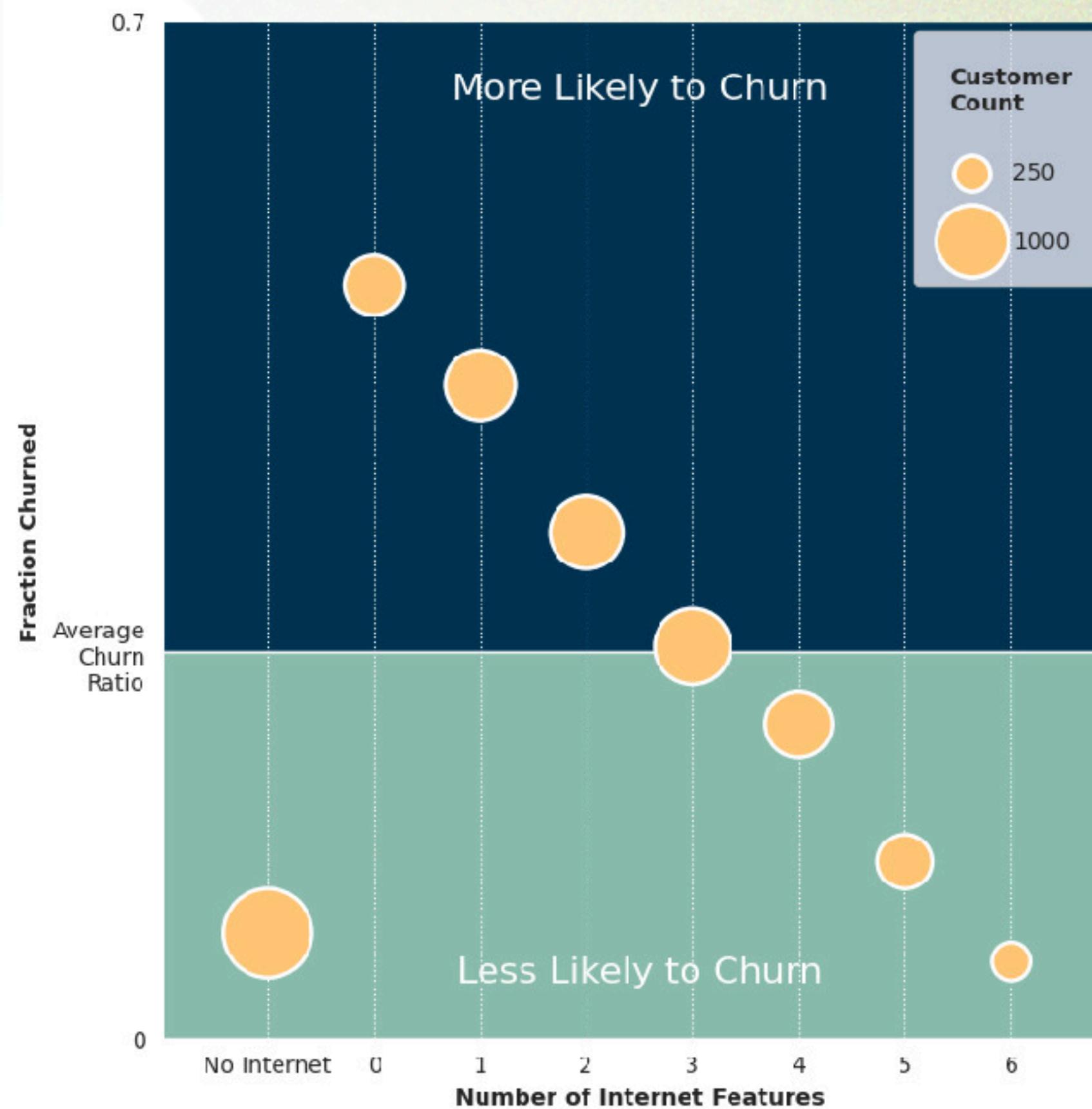
TENURE

- Customers who have been with Swan Teleco for a longer tenure are less likely to churn
- Customers with a tenure shorter than two years are more likely to churn
- The highest risk of churning is observed among customers with month-to-month contracts



Higher yellow dot = greater churn risk

INTERNET FEATURES



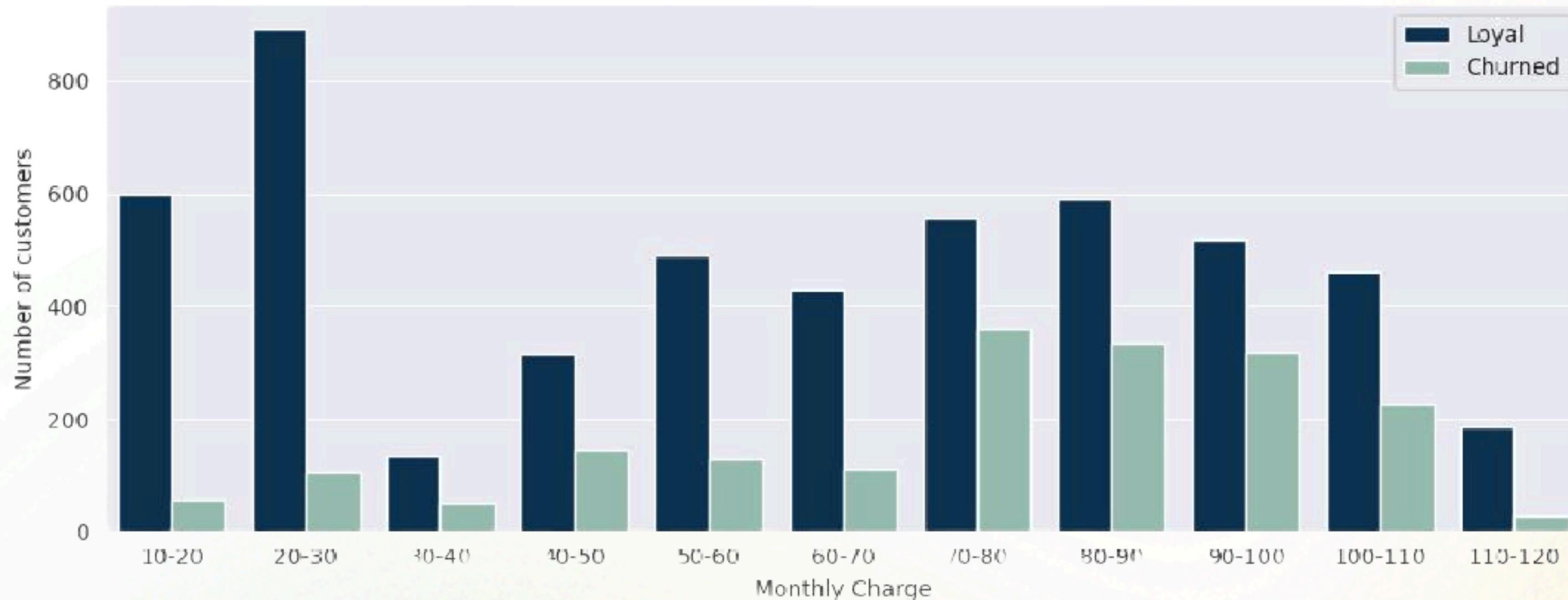
Higher yellow dot = greater churn risk
Size of dot = customer count



Internet features include Online Security, Tech Support, Online Backup, Device Protection, Streaming TV, Streaming Movies.

- Customers who subscribe to a greater number of internet features are less likely to churn
- On the other hand, customers with no internet service are easily retained

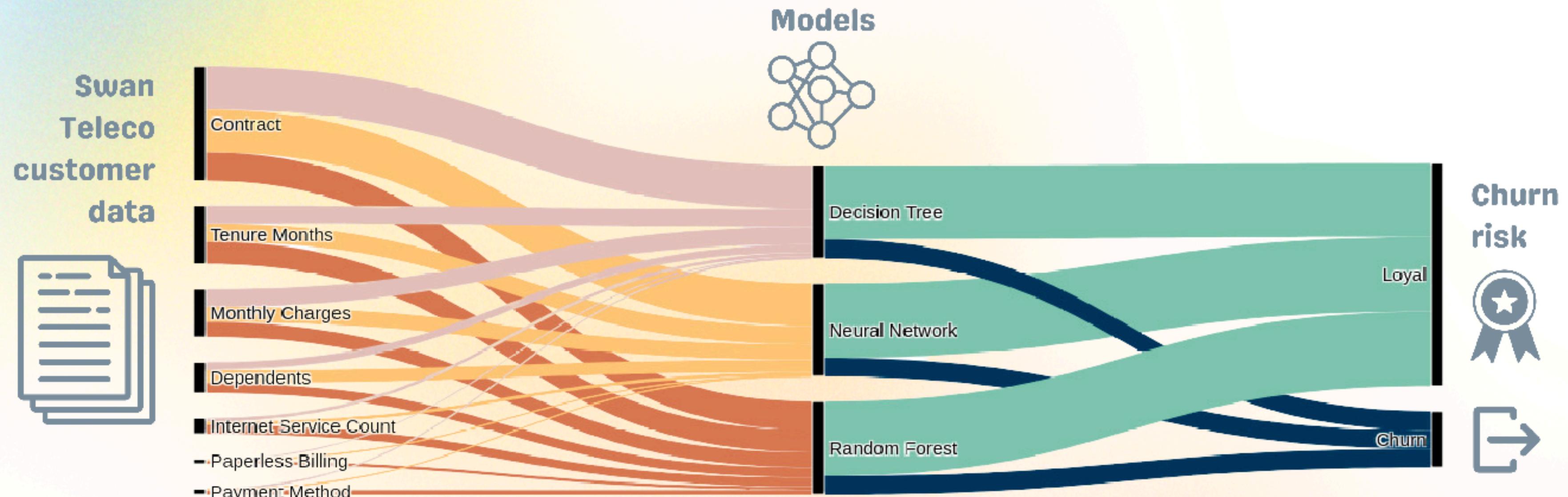
MONTHLY CHARGES



- The share of churned customers is higher among those whose monthly charges are in the range of 70-110. In contrast, customers whose monthly charges are less than 40 are easier to retain
- As monthly charges increase, competition in the market grows, leading customers to pay more attention to performance and offers from competitors



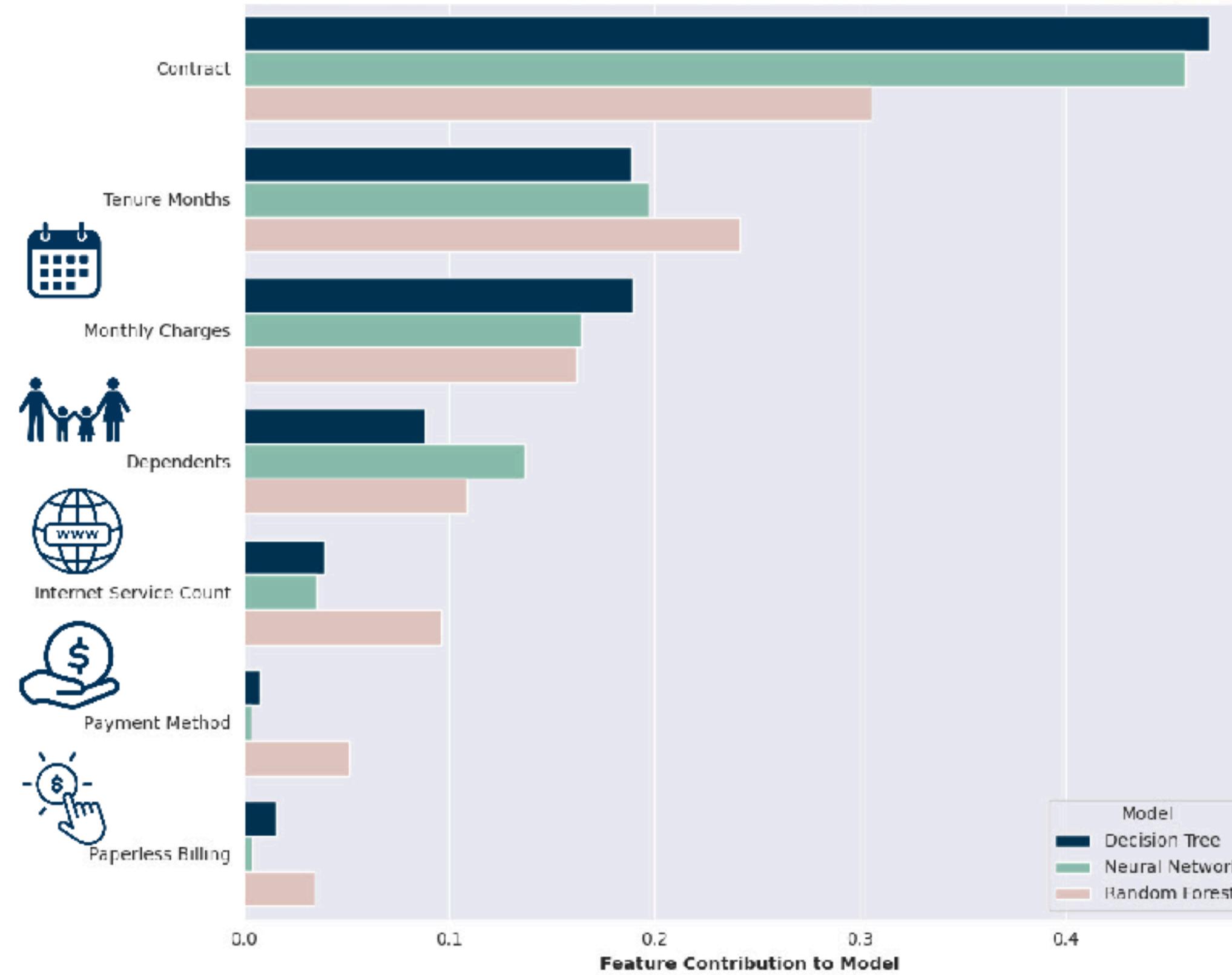
PREDICTING CHURN RISK



We tested three machine learning models to predict the churn rate:

- Decision Tree
- Random Forest
- Neural Network

KEY FACTORS

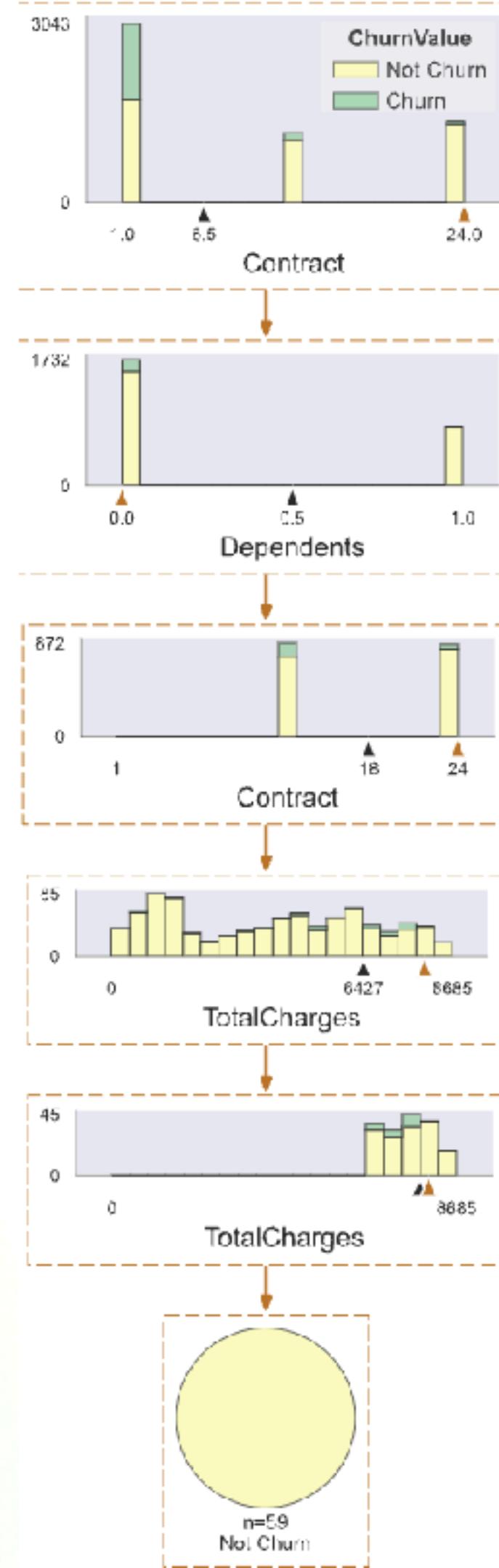


- We determined that the **length of contract** plays the biggest role in retaining customers. Longer contracts should be the best sign up factor to incentivise
- These models use contract length, tenure months, monthly charges, if the customer has dependants, their number of internet services, payment method and if they converted to paperless billing, to assess the risk of churn
- Having a greater number of internet service options and lower charges can lower the churn risk
- Having dependents was associated with a lower risk of churning

PREDICTION EXAMPLE

Contract Length	2 Years
Dependents	None
Internet Service Count	5
Total Charges	\$ 8500

The prediction is that this person is not going to churn, as we can see in the corresponding pie chart



500 MAILERS

PROBLEM



**HIGH
CHURN
RATE**

Focus on Recall:
extracting the customers
that are more likely to
churn



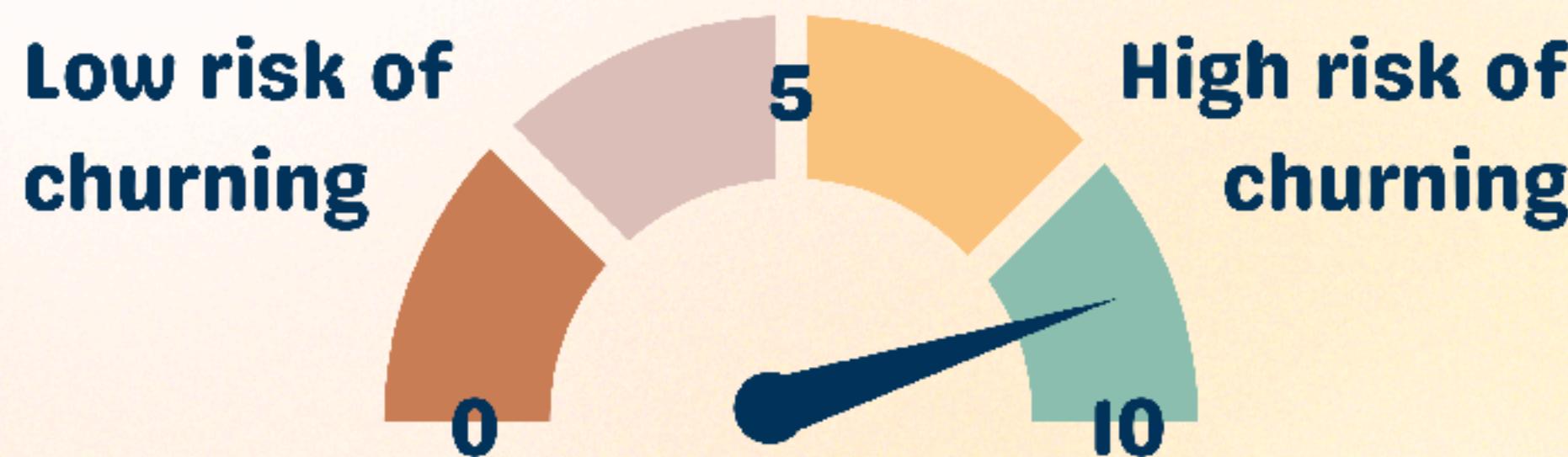
SOLUTION



willow_500CustomerIDs.csv

List of 500 current
customers with the higher
risk of churning to
approach.

CHURN RISK SCORE



- The model calculated the churn risk for every current customer on a scale of 1 to 10
- The model was tuned, achieving 80% accuracy



Willow_CustomerChurnScore.csv

List of Customer IDs and their Score

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