

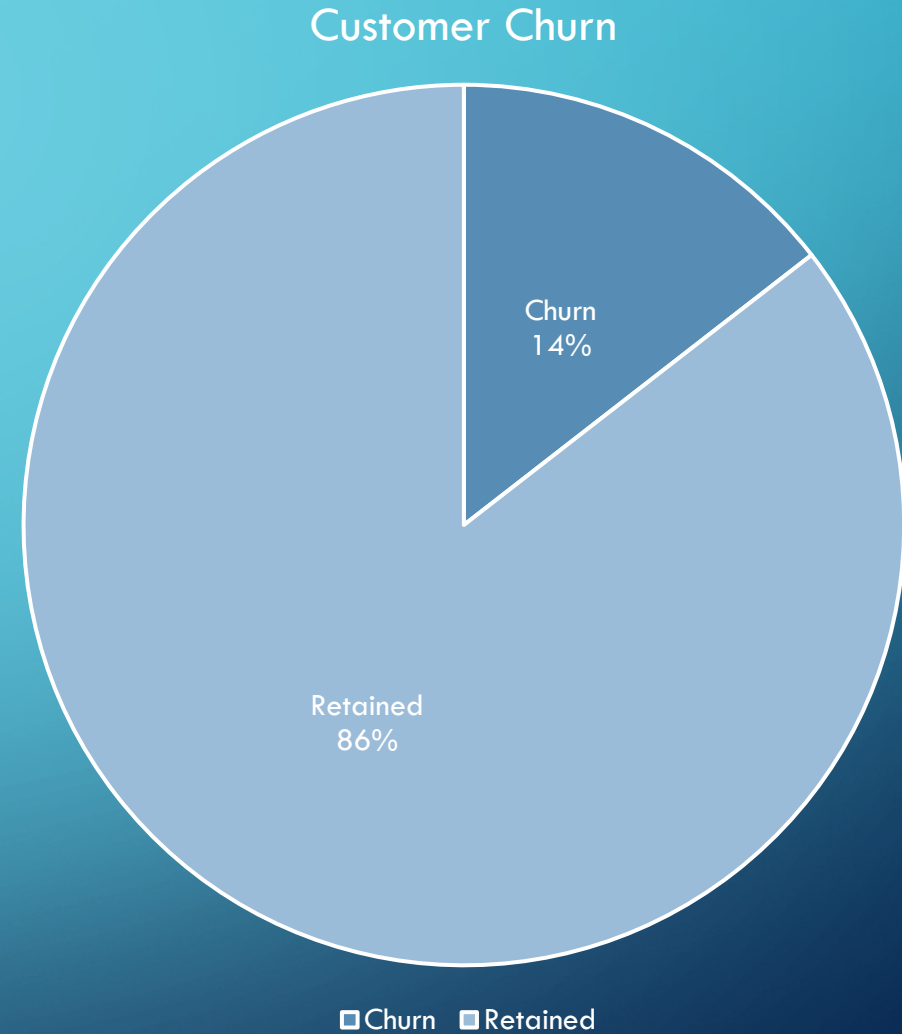
A decorative graphic on the left side of the slide, consisting of a network of white lines and small circles on a blue gradient background, resembling a circuit board or a neural network.

SYRIATEL CUSTOMER CHURN ANALYSIS

BY JUSTIN WEIBLE

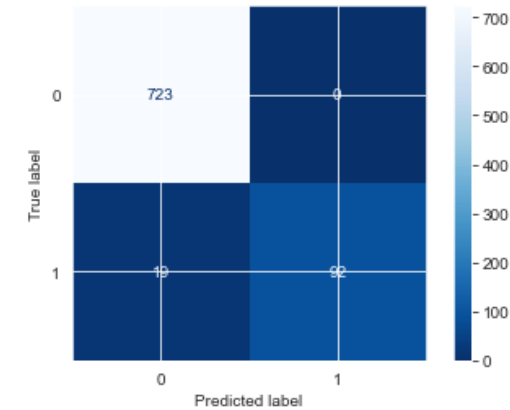
DATA:

- Data was analyzed from 3333 customers
- The data included information on:
 - Account length
 - International plan
 - Voicemail plan
 - Number of voicemail messages
 - Customer Service calls
 - Customer charges (total, day, evening, night, international)
 - Number of customer calls and length of calls (total, day, evening, and international)
- Of the 3333, 2850 customers were retained (86%) and 483 churned (14%)



MODEL

- Customer data was run through various models in order to find the most accurate model.
- The model used was chosen based on precision in order to predict if a customer churns with accuracy.
- Our model has a precision score of 0.97 when predicting customers that retain their service and a precision score of 1.00 when predicting customers that churn.
- The model correctly predicted all customers that were retained but predicted customers that churn with a 17% error.



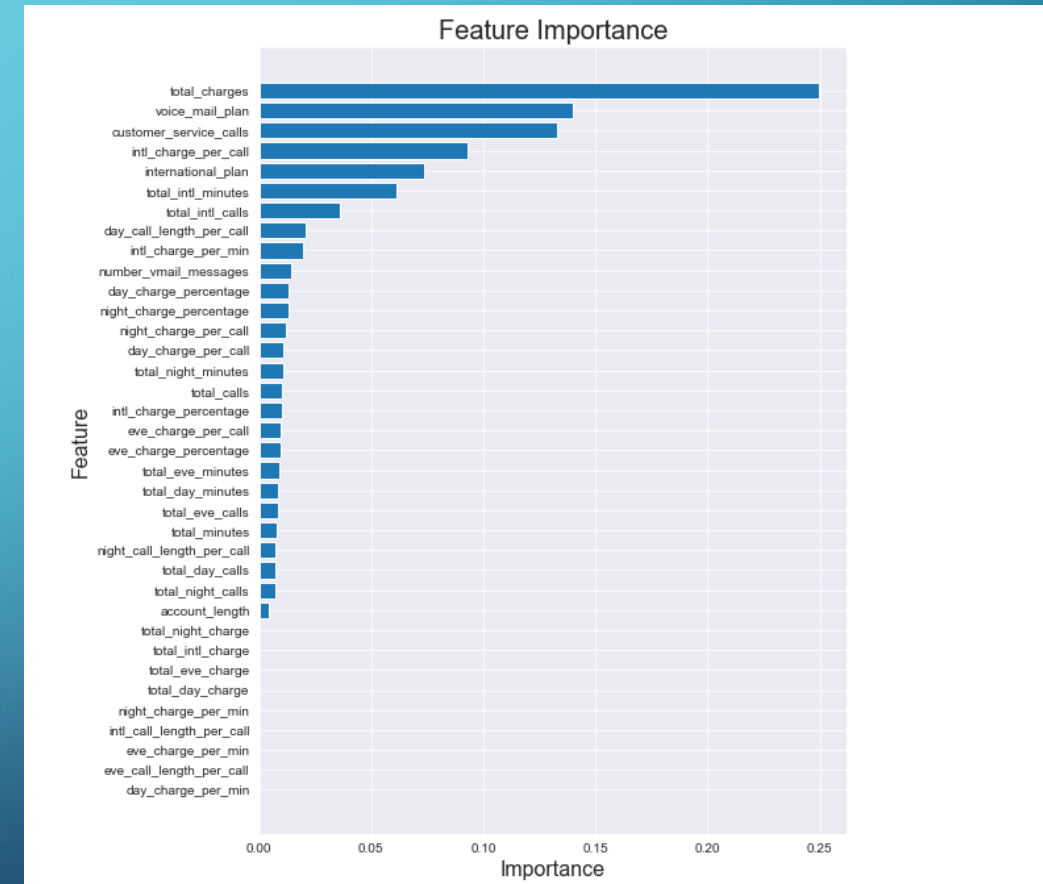
Testing Accuracy for Our Classifier: 97.72%

Classification Matrix:

	precision	recall	f1-score	support
0	0.97	1.00	0.99	723
1	1.00	0.83	0.91	111
accuracy			0.98	834
macro avg	0.99	0.91	0.95	834
weighted avg	0.98	0.98	0.98	834

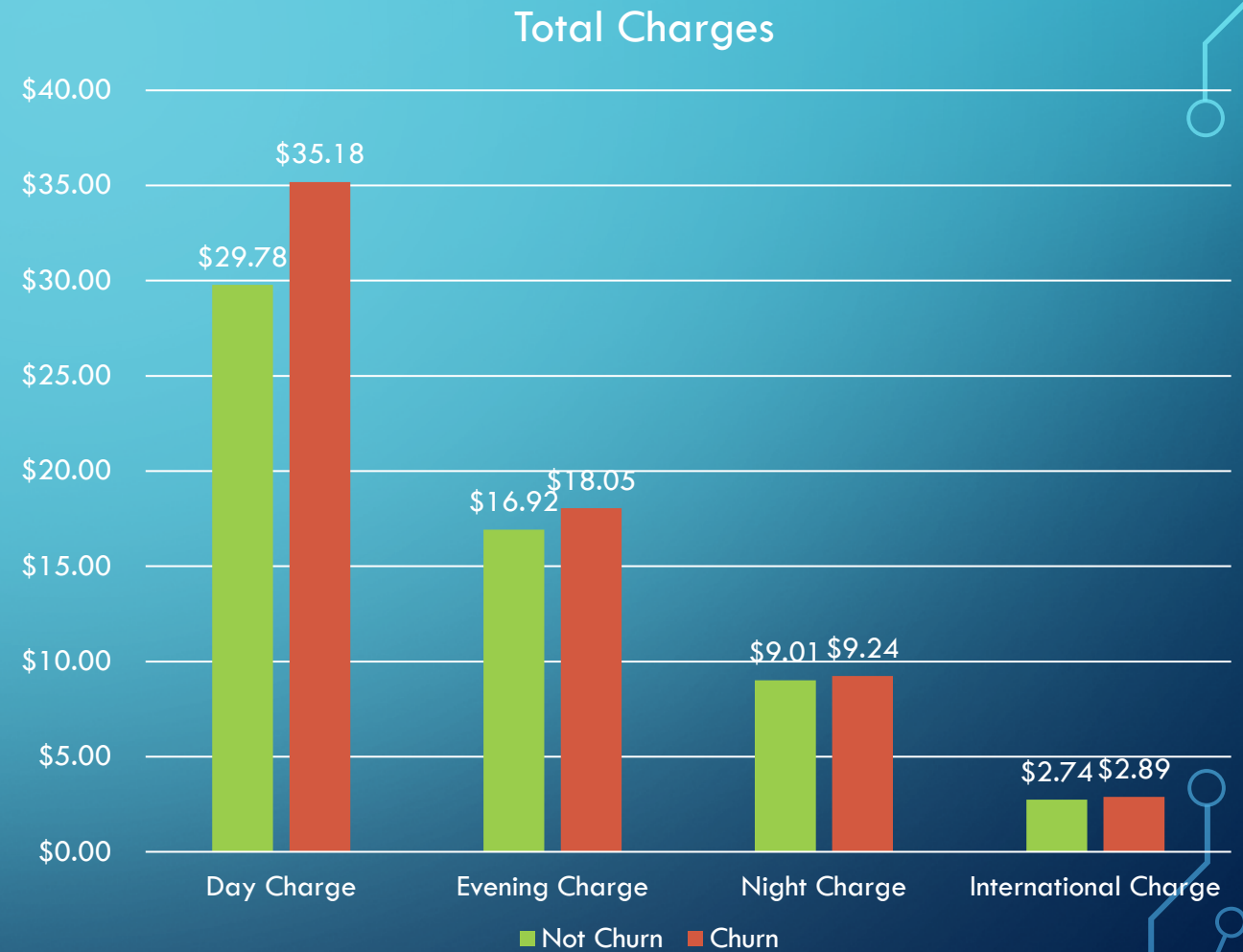
TOP FACTORS AFFECTING CHURN

- Using the model as a starting point for data exploration, the top factors affecting churn are:
 - Total charges
 - Voicemail plan
 - Customer Service calls
 - International plan



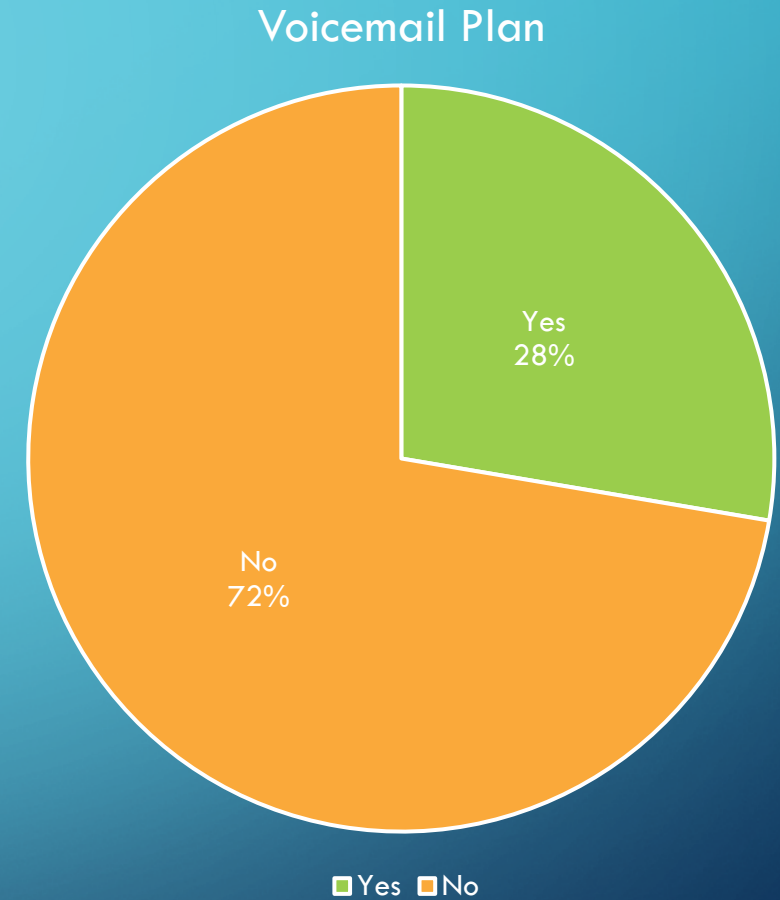
TOTAL CHARGES

- Customers who pay more for their service tend to churn at a higher rate.
 - Customers who churn pay \$65.35 on average.
 - Customers who don't churn pay \$58.45 on average.
- Customers who pay higher day charges also churn at a higher rate compared to charges at other times.



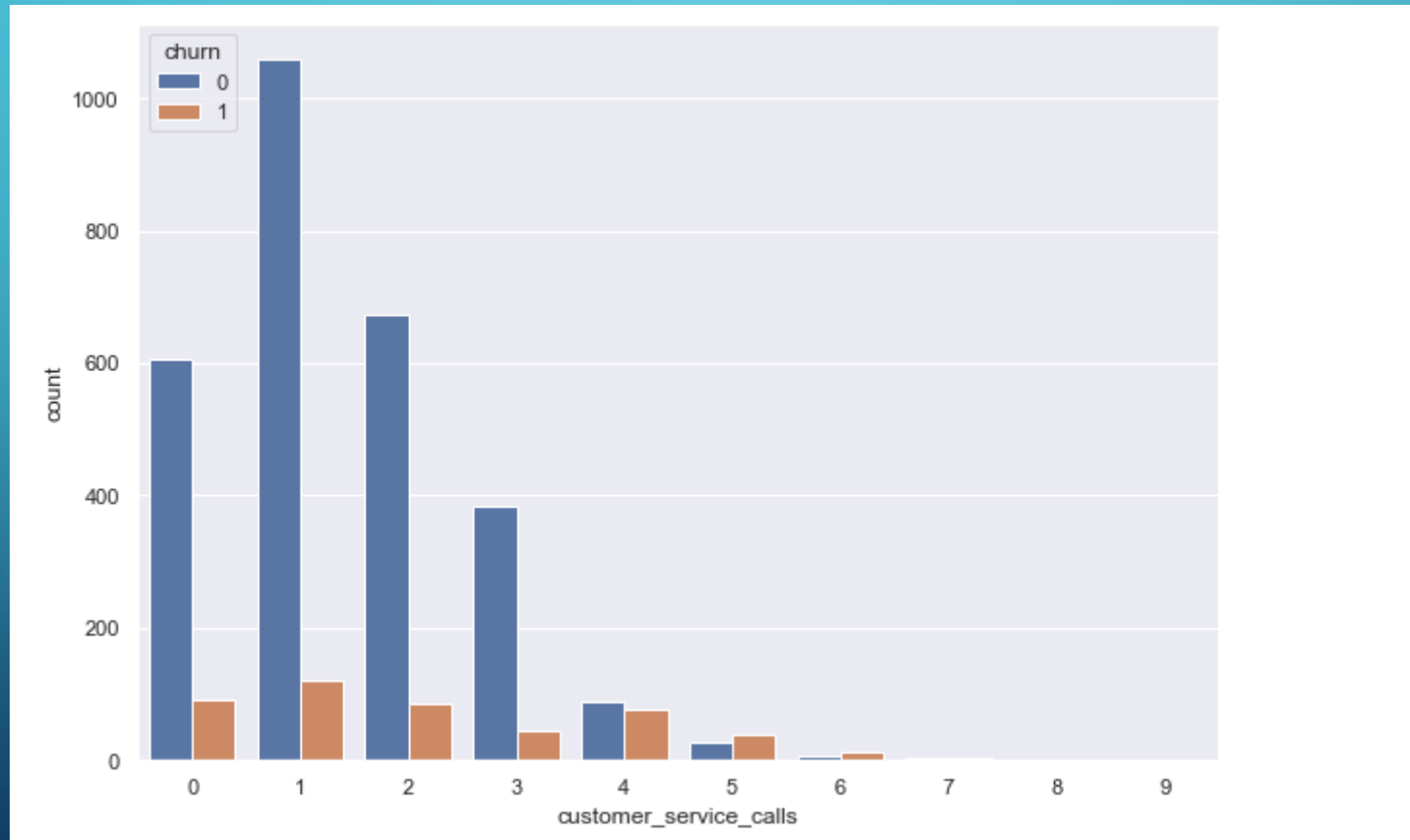
VOICEMAIL PLAN

- Only 28% of our customers have a voicemail plan.
 - 72% of the customers that churn do not have a voicemail plan.
 - 28% of the customers that churn have the voicemail plan.



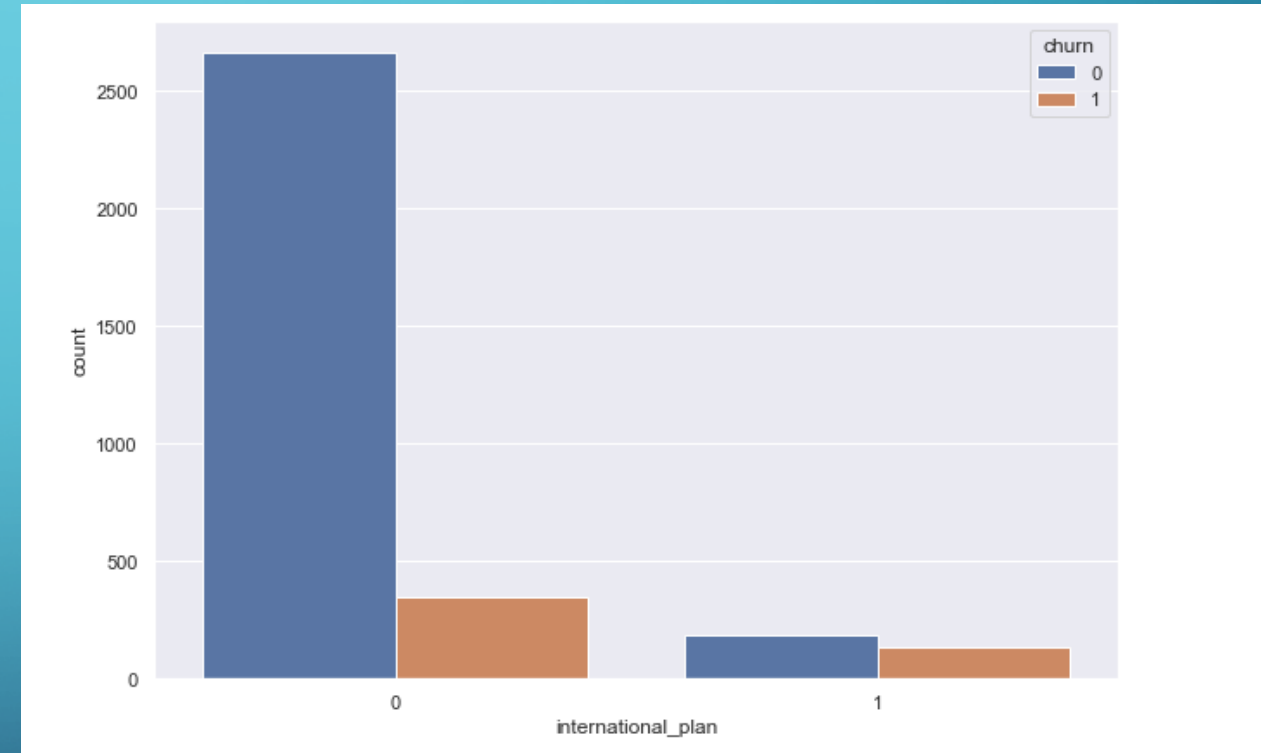
CUSTOMER SERVICE CALLS

- 52% of customers who have made 3 or more calls to customer service churn.
- 79% of customers have made at least 1 call to customer service.



INTERNATIONAL PLAN

- Only 10% of our customers subscribe to the international plan.
- There is virtually no difference in international charges per minute between those with an international plan and those without an international plan.
 - 26.8 cents per minute for those without an international plan.
 - 27 cents per minute for those with an international plan.



RECOMMENDATIONS

- Evaluate the rates we're charging our customers.
 - Customers seem to be displeased with the high rates, as those who are charged the most tend to be more likely to churn.
- Give more advertisement to our voicemail plan.
 - With the low number of people that are subscribed to our voicemail plan, it seems that some customers might simply be unaware that we offer one.
- Evaluate customer service and what we might be able to do better to assist the customer.
 - Customers making more than 3 service calls are churning at over 50%.
 - Additional training for customer service staff might be needed, but it also could be related to other factors.
- Research whether an international plan is worth providing, and if it is, look at ways that the service might be improved.
 - Very few customers are using an international plan
 - Those that are using it are seeing no cost reduction to their service.

The background is a blue gradient. In the corners, there are white line-art illustrations of circuit boards or neural networks, with lines and small circles representing nodes.

THANK YOU

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