



# SyriaTel Customer Churn Analysis

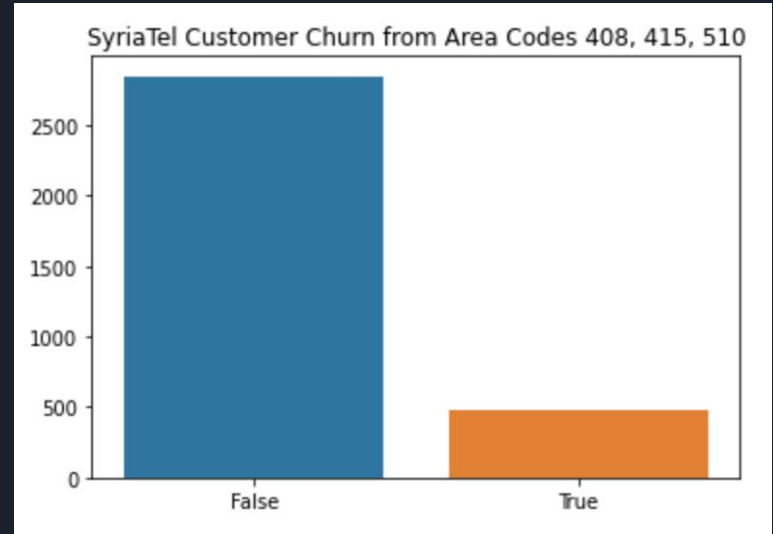
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# Problem Statement

SyriaTel's customer churn percentage - **14%**

Which factors predict if a SyriaTel customer will stick around or are likely to cancel their contract?

Can we predict who is most at risk for cancelling their contract?





# Business value - the “Why”

Losing existing customers is expensive!

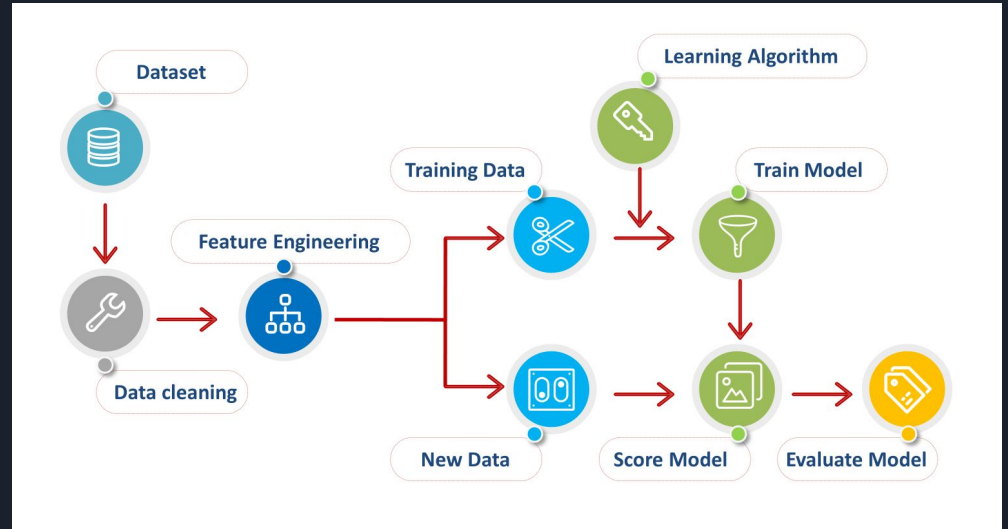
Identifying our most “at-risk” customers focuses our Account Executives’ finite time

Reducing customer churn is key performance indicator for SyraTel

# Methodology

Use data analysis and Machine Learning algorithms to identify trends in SyriaTel's customer churn data that are not readily apparent to the human eye

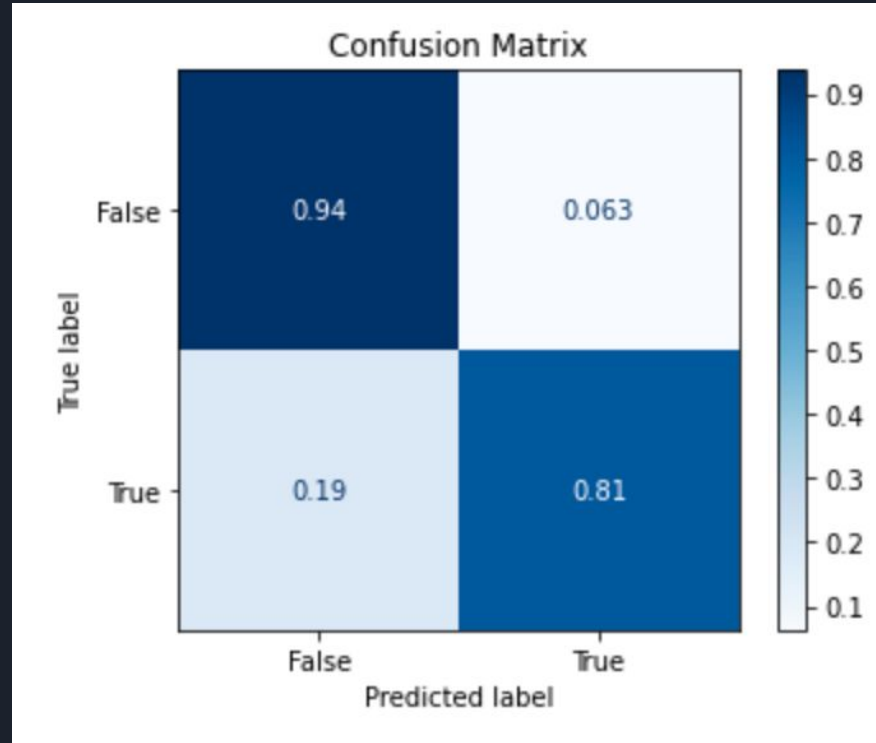
Build a model that can accurately predict which customers are most likely to cancel their account in the near future



# Analysis

Our model predicted which customers were preparing to cancel their contract with **81% accuracy**

What were some common attributes among these customers?



# Business Recommendation #1

Provide SyriaTel account executives statistics on their customer **night** and **international** phone usage, and if they have a **voice mail plan**.

**Result:** Account executives focus their time on the customers statistically most likely to cancel their contracts in the near future

Weight	Feature
0.1363 ± 0.1253	total night calls
0.1218 ± 0.1248	total intl minutes
0.1130 ± 0.0445	voice mail plan_yes
0.0631 ± 0.0475	customer service calls
0.0608 ± 0.0467	total intl calls
0.0503 ± 0.0502	area code_510
0.0501 ± 0.0844	account length
0.0441 ± 0.0490	voice mail plan_no
0.0436 ± 0.0509	area code_415
0.0432 ± 0.0808	area code
0.0390 ± 0.0336	area code_408
0.0352 ± 0.0284	international plan_no
0.0344 ± 0.0252	total night charge
0.0334 ± 0.0241	international plan_yes
0.0312 ± 0.0265	total eve calls
0.0295 ± 0.0256	total intl charge
0.0231 ± 0.0370	total night minutes
0.0162 ± 0.0374	total day charge
0.0129 ± 0.0313	total eve minutes
0.0075 ± 0.0114	total eve charge
0.0047 ± 0.0081	total day minutes
0.0037 ± 0.0078	total day calls
0.0027 ± 0.0065	number vmail messages

↑  
Higher  
churn rate

# Business Recommendation #2

Build a **company-wide data aggregator and visualization dashboard** that continuously tracks and ranks the customers with the highest chance of cancelling.

**Result:** Company-wide and executive level visibility on the most high-risk accounts

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## Business Recommendation #3

Solicit and record **customer feedback** from departing customers. Create a new database just for this purpose.

**Result:** A more granular understanding of **why** SyriaTel's customers are cancelling their contracts.







# Future Work

- Collect more churn data from other area codes to provide a more complete analysis of SyriaTel's customer base
- Include existing customer feedback and/or market research into existing and future customer churn datasets
- Explore ways to provide better and more real time data to our Account Executives



# Thank you!

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