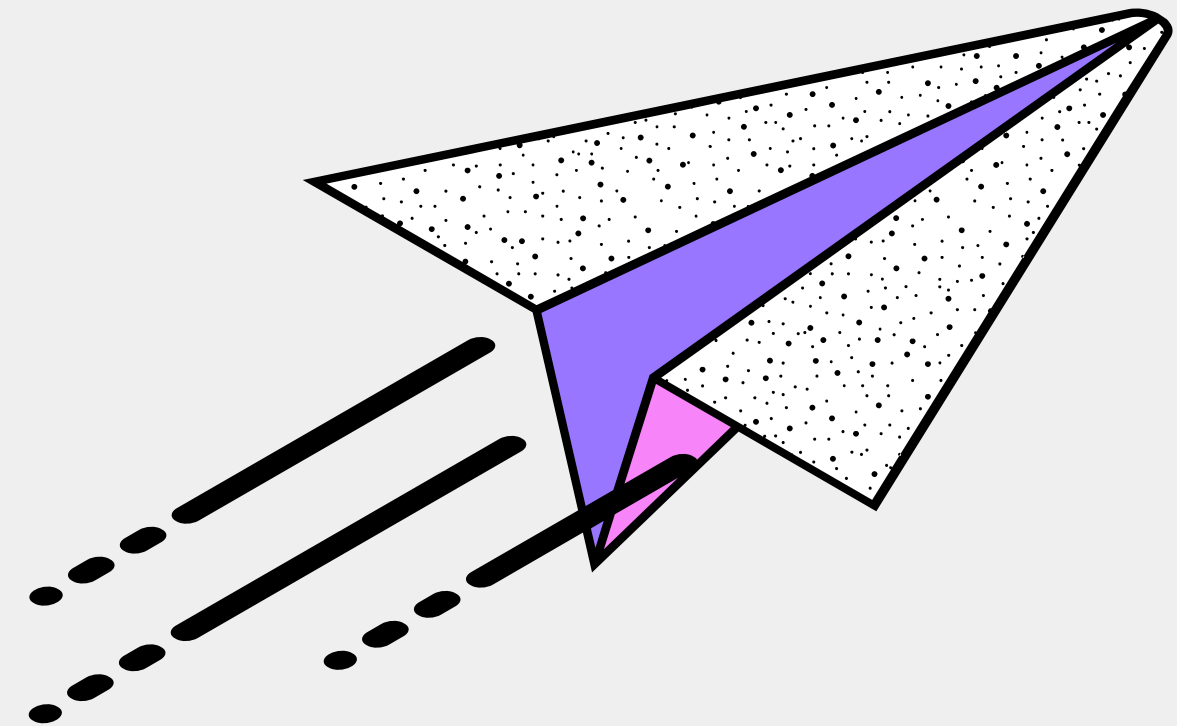
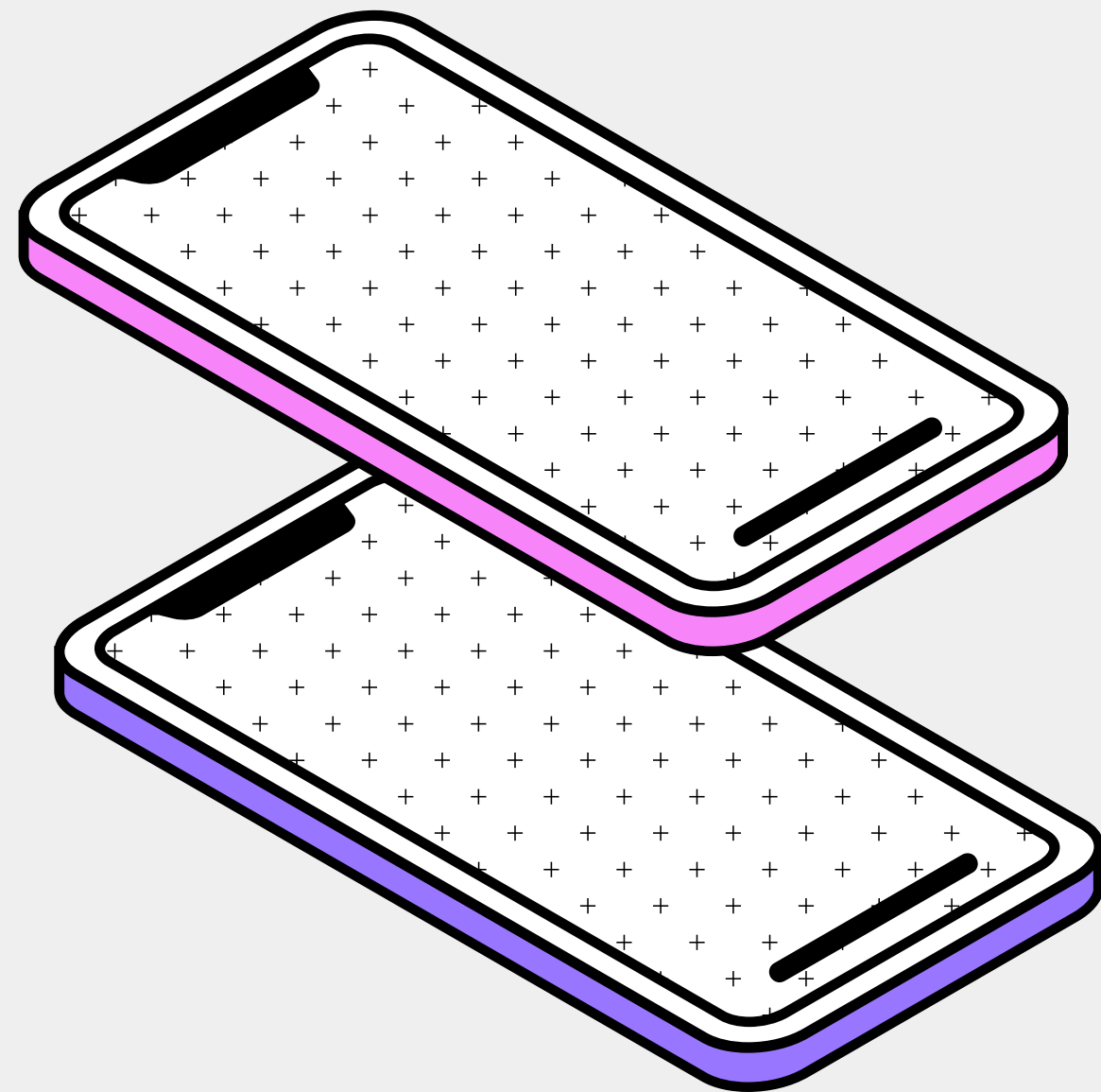


TO CHURN OR NOT TO CHURN

TELECOM CUSTOMER RETENTION



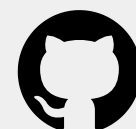
November 17, 2023

TEAM



Andrei Hushcha

Github / Presentation Lead

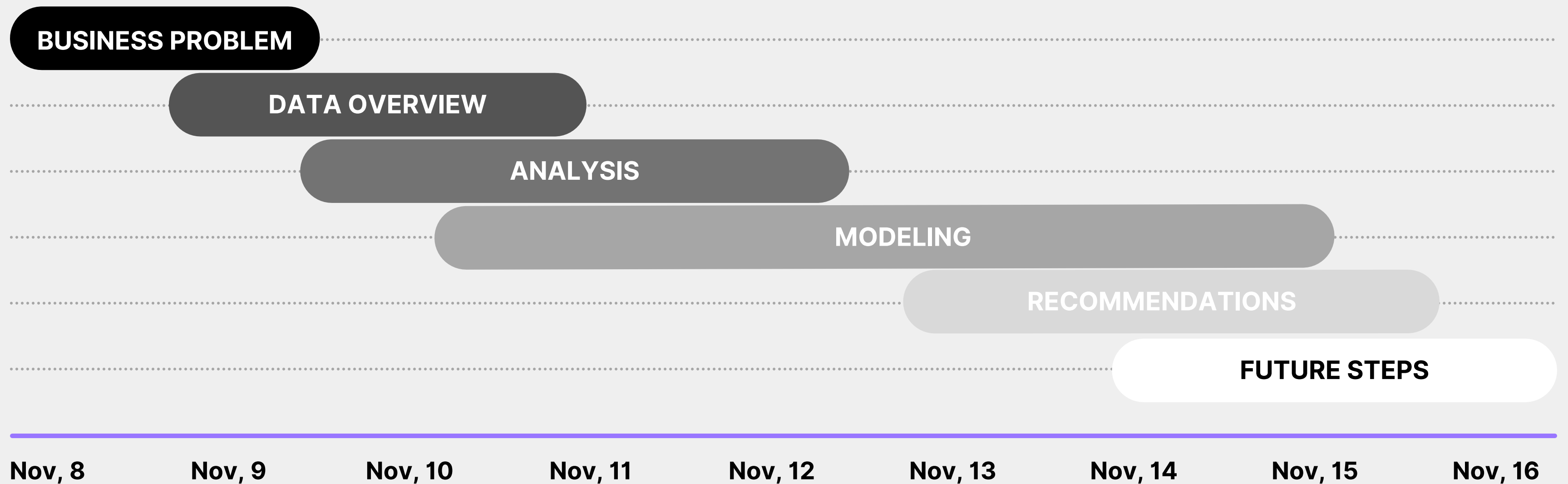


Marley Lopez

Tech Lead

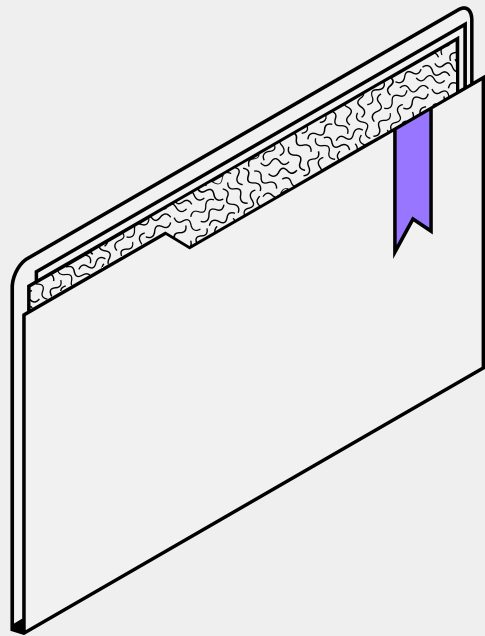


PROJECT AGENDA



NOTE: No Subject to revision.

BUSINESS PROBLEM



Our client is SyriaTel, a telecommunications company, hoping to improve client retention.

The business problem is to predict patterns in churn, and recommend strategies to curb churn.



FINDINGS



Three features explain over half of churn:

- 1. customer service calls**
- 2. total day minutes**
- 3. international plan**



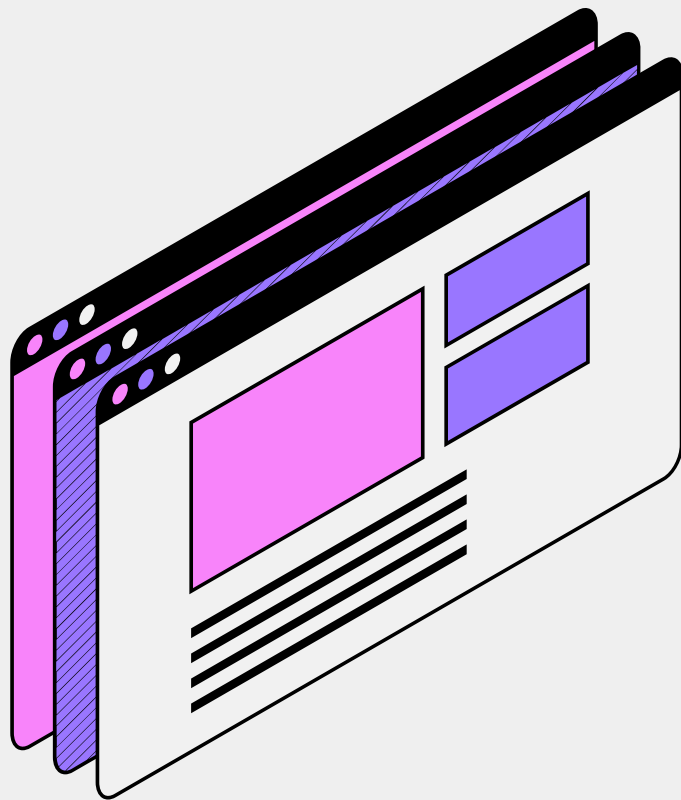
The strongest model is LightGBM predicting the best F1 score



Every additional call to customer service lowers a client's probability of staying by 48%



DATA OVERVIEW



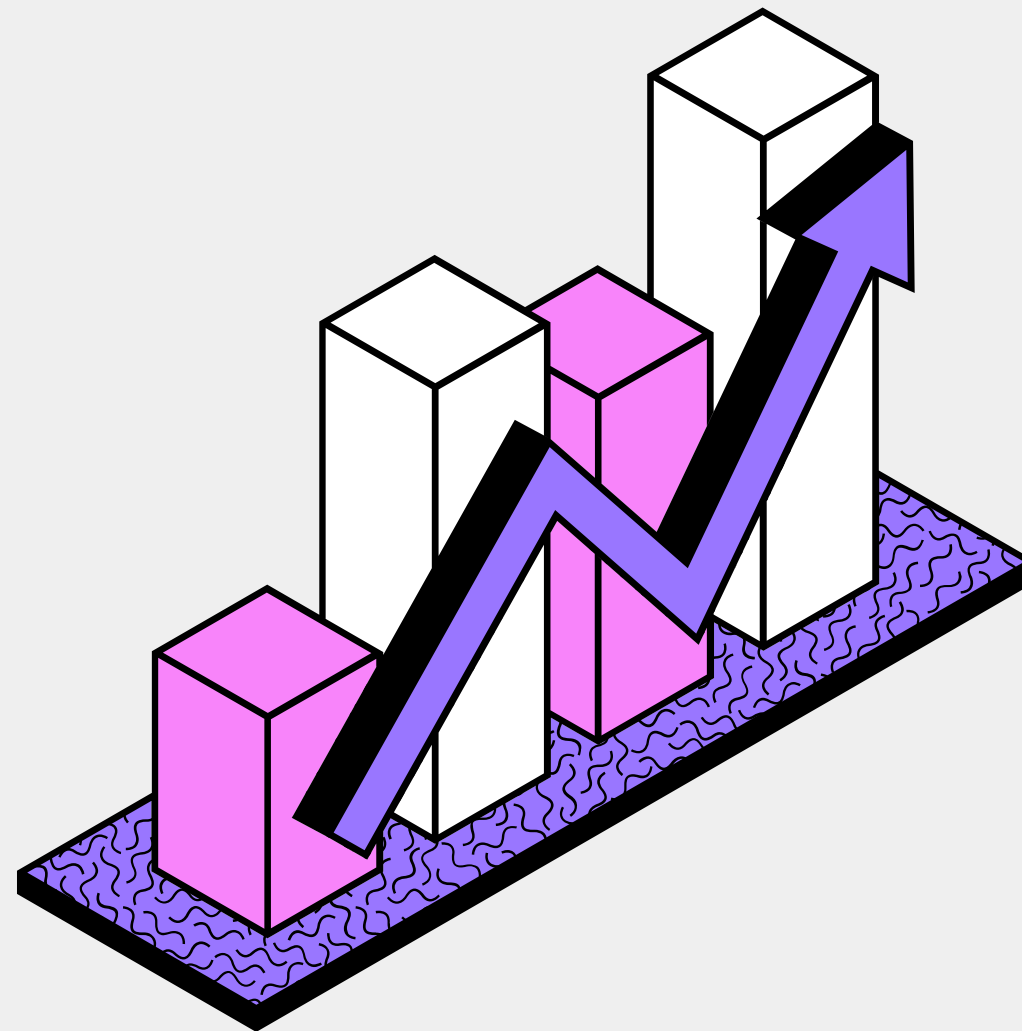
The data source is SyriaTel customer churn dataset

Limitations:

- **No information on timeline**
- **Dataset last updated 6 years ago**

Imbalanced target class

ANALYSIS



Three features explain over 56% of churn

customer service calls: 19.58%



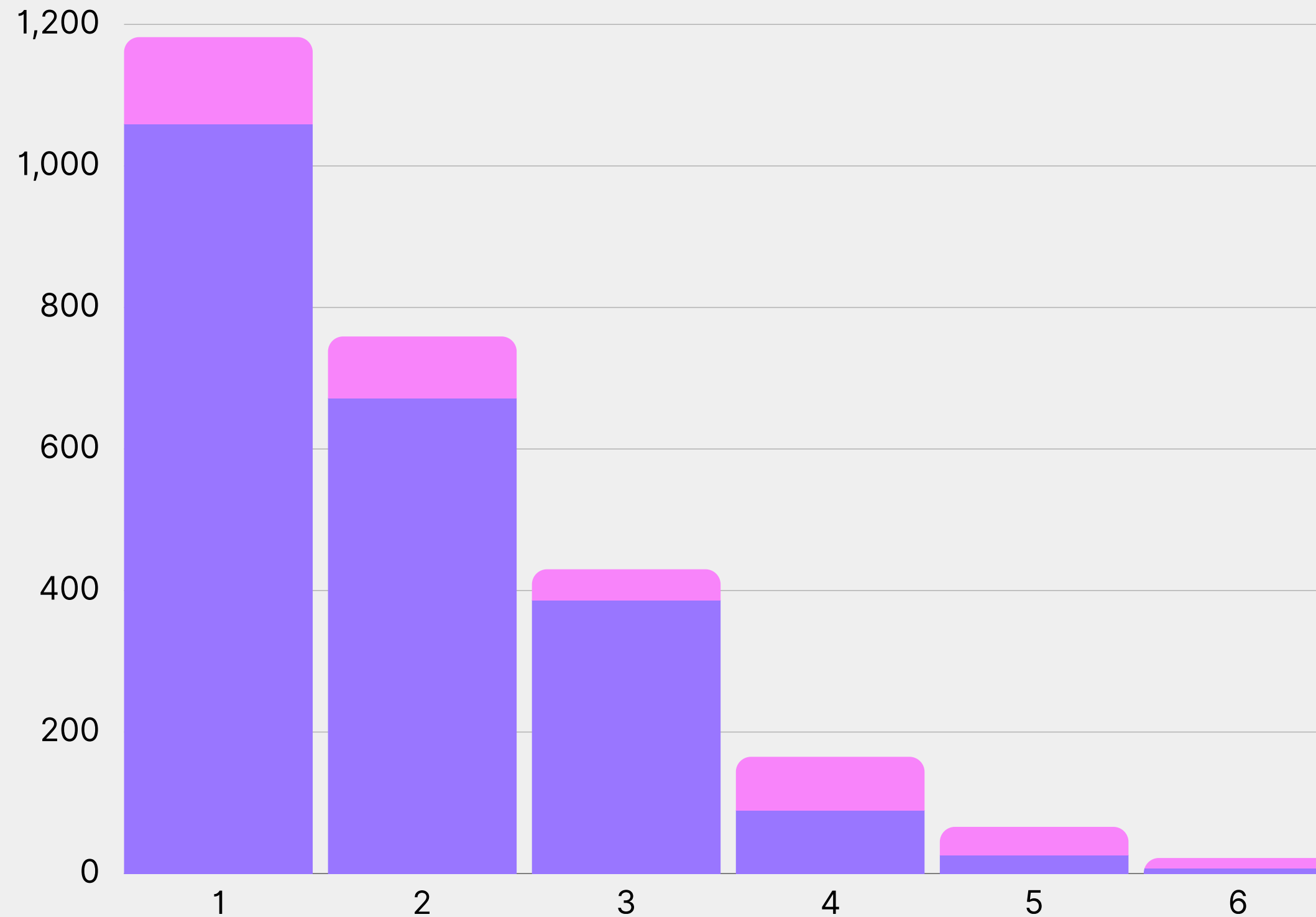
total day minutes: 19.01%



international plan: 17.74%

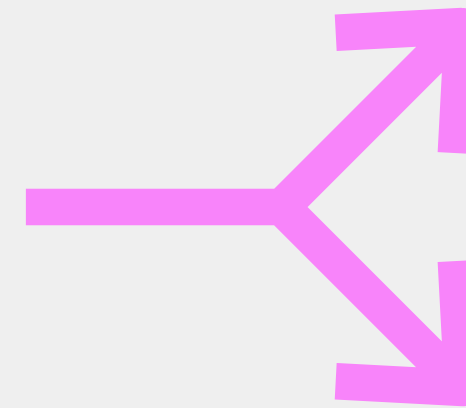
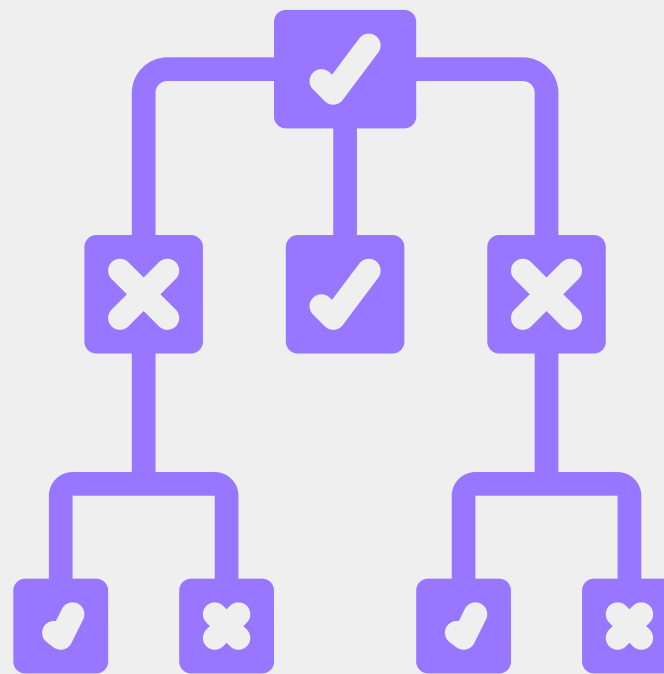
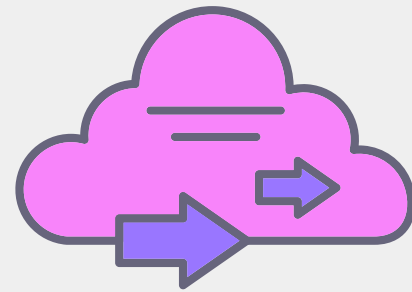
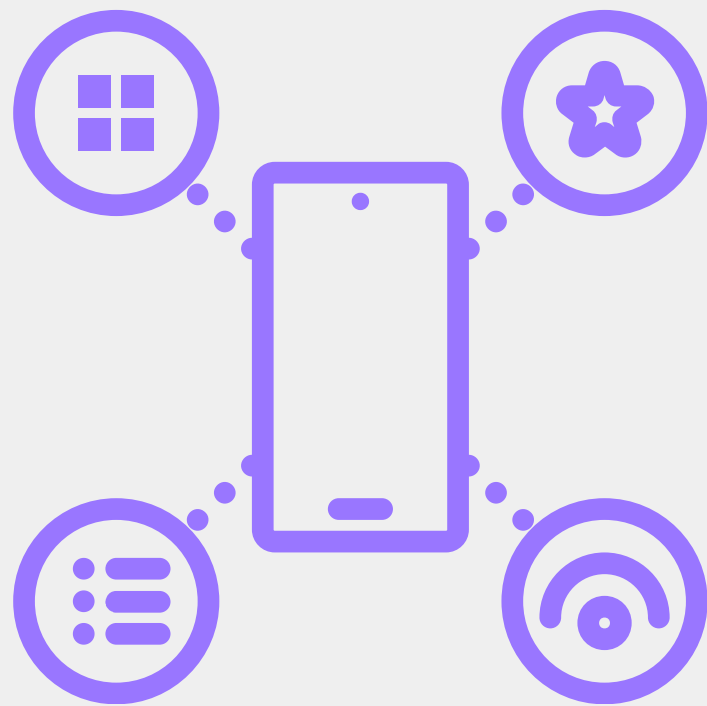


Every call a client makes to customer service makes them 13.31% more likely to leave



*holding everything else in the model constant.

LIGHT GBM MODEL

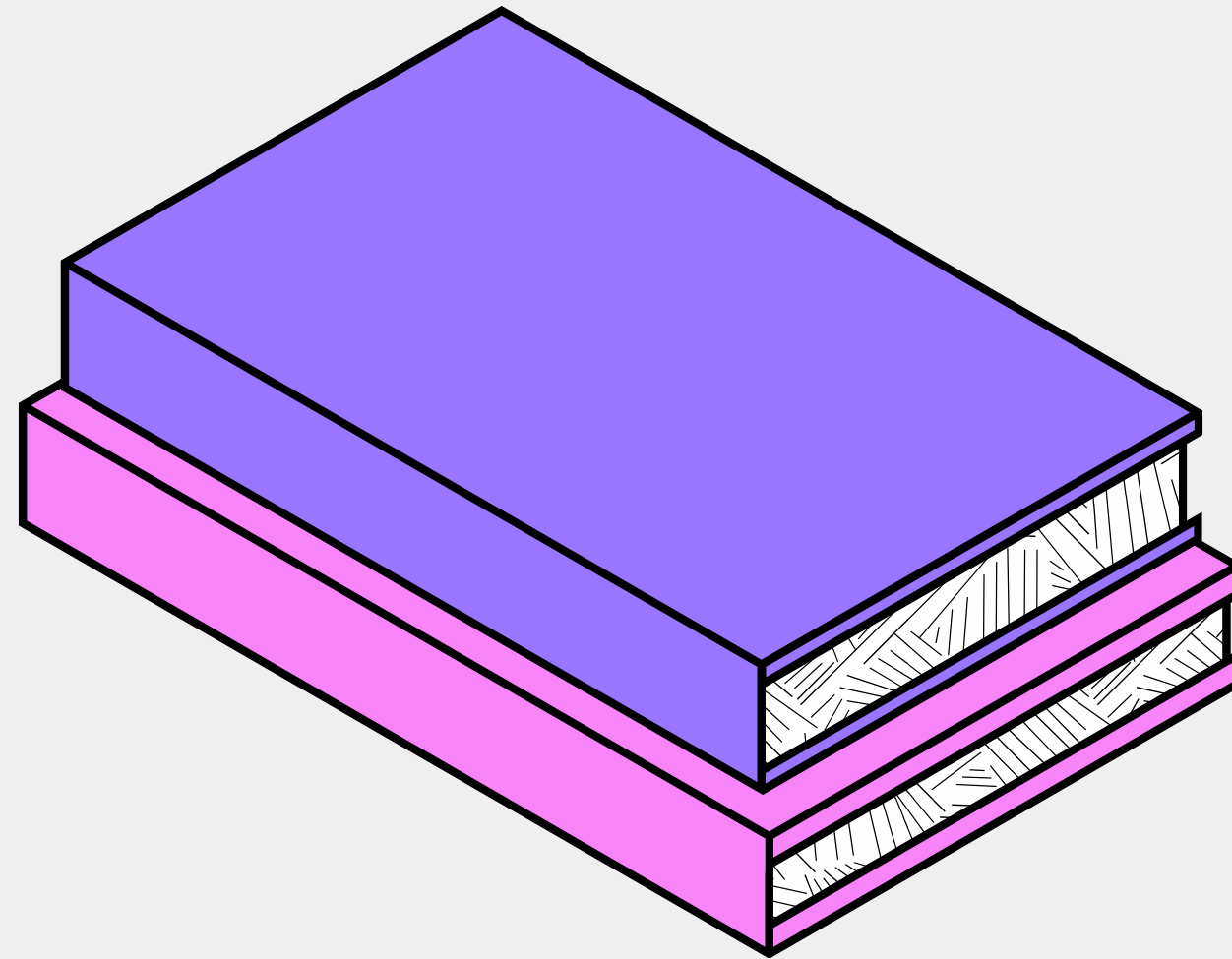


NO CHURN: 0

CHURN: 1

ACCURACY SCORE: 84.9

Conclusion



FINDINGS



Three features explain over half of churn:

- 1. customer service calls**
- 2. total day minutes**
- 3. international plan**



**The strongest model is LightGBM,
predicting an accuracy score of 84.9%**



**Every additional call to customer service lowers
a client's probability of staying by 48%**



RECOMMENDATIONS



**Incentivize phone calls and engagement with the plan.
Happy WiFi, happy life!**



**Improve customer experience with the
international plan.**



**Address client needs.
Less customer service calls is better.**



NEXT STEPS



Compare to other telecommunications companies.



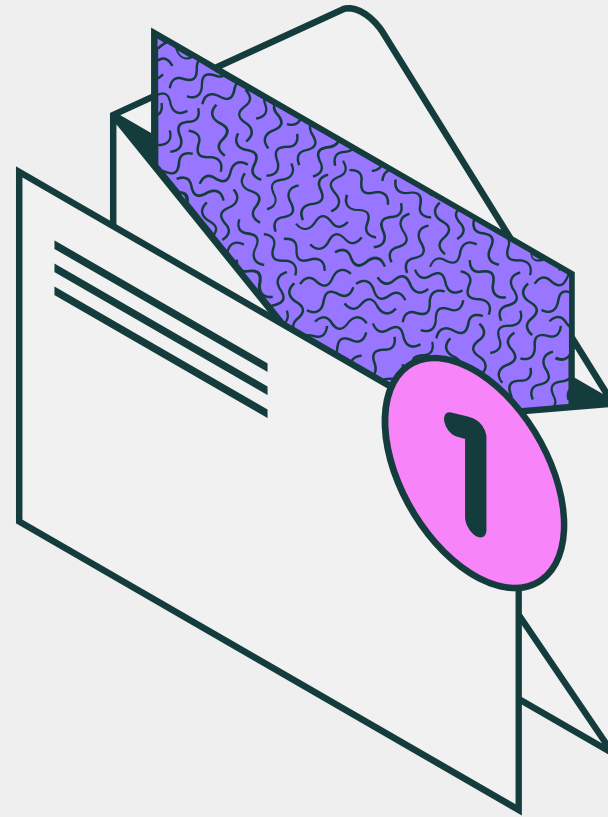
Pair with an NLP model to better understand client feedback.



Add information such as start and stop of membership to confirm relevancy of all user data.



Do you have any questions?



Appendix I

