Telecom Churn Prediction

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Business Understanding

- More expensive for new customers
- Cheaper to keep existing ones
- Project Designed to stop churn

Data Understanding

- 2 Dataset
- Class imbalance 75% non-churners
- Customer privacy
- Customer Behavior

Model

- Gradient Boosting Classifier
- Group of decision trees
- Churn Recall (91.6%)
- Overall Accuracy (57.4%)
- Churn Precision (36.6%)
- Recall Over Accuracy

Evaluation

- Churners missed: 41
- False Positives:780
- Churners correctly flagged: 450
- Non churn correctly predicted: 657
- False Positive Business POV

Conclusion

- App http://localhost:8501/
- Business Impact
- Model Effectiveness
- Actionable Outputs

Citations

- IBM Telco Customer Churn Dataset https://www.kaggle.com/datasets/blastchar/telco-customer-churn
- BigML Telecommunications Churn Dataset https://www.kaggle.com/datasets/mnassrib/telecom-churn-datasets
- Streamlit App Inspiration Video https://youtu.be/ZZ4B0QUHuNc?si=9eAn2_0imufvIJL0 This video inspired the design and structure of the Streamlit churn prediction application included in this project.