

Predicting Customer Churn with Machine Learning

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2026 Graduate Spotlight



The Problem: Customer Churn

❌ Customers cancel telecom services



Losing customers costs companies millions



Retaining customers is cheaper than acquiring new ones



Dataset Overview



Customer contracts



Monthly charges



Internet & phone services



Customer tenure



Demographic information

Prepared & cleaned data for modeling

Customer Data			
ID	Contract	Montly Charges	Internet Service ▾
█	█	█	█
█	█	█	█
█	█	Churn: Yes	█
█	█	█	█

Machine Learning Models Tested



Logistic Regression



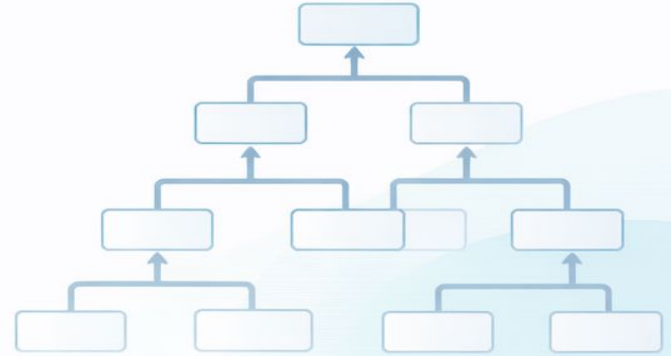
Random Forest



Gradient Boosting



Best Model: Gradient Boosting Classifier



Model Performance



ROC-AUC: **0.87**



F1 Score: **0.66**

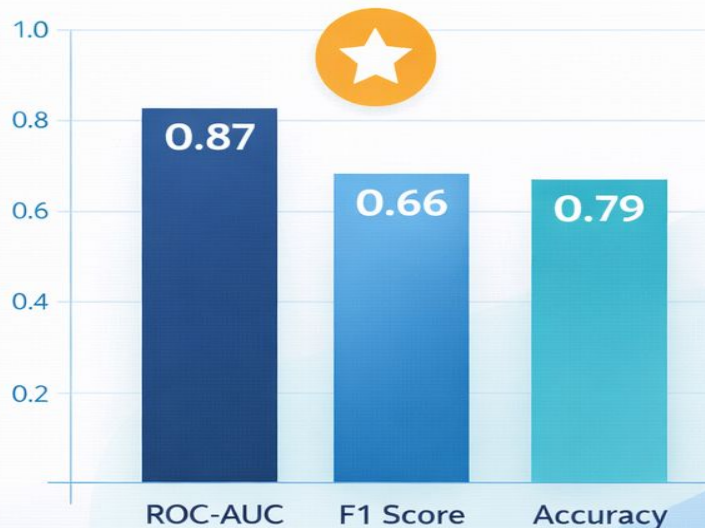


Accuracy: **79%**



Best Model:

Gradient Boosting Classifier



Key Lessons



Data preparation is critical



Ensemble models performed best



Machine learning can drive business decisions



Looking Forward



Continue developing data science skills



Apply ML to environmental & sustainability challenges

