



CASE STUDY 2 CHURN PREDICTION

Automated Patient Engagement & Workflow Optimization

Our client, a leading Middle East telecom company, was struggling with a **25% annual customer** churn and an underperforming 60%-accurate prediction model that caused wasted retention efforts and revenue loss. Instead of opting for costly transformer-based models, we identified key pipeline issues and built a personalized outreach system that accurately predicted churners, uncovered their pain points, and delivered tailored retention offers—significantly boosting

prediction accuracy while cutting model training time.

CHURN PREDICTION KEY FEATURES

91% CHURN PREDICTION ACCURACY



Achieved using optimized tree-based ML models, significantly outperforming their previous system.

GENAI-POWERED PERSONALIZED OUTREACH



Delivering tailored messages to at-risk customers, fostering stronger engagement.

75% INFRASTRUCTURE COST REDUCTION



Achieved by leveraging efficient ML models, avoiding the high costs of transformer-based alternatives.

REAL-TIME MESSAGE GENERATION



Automated message creation, replacing a cumbersome 2-day manual process.

SEAMLESS CRM INTEGRATION Ensuring multi-channel delivery via email, SMS, and call center for comprehensive customer reach.

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CHURNPREDICTION TECH STACK

DEPLOYED A HIGH-ACCURACY CHURN MODEL (91%) AND GENAI OUTREACH USING SCIKIT-LEARN, VERTEX AI, AND PALM API—TRANSFORMING CUSTOMER RETENTION FOR A TOP MIDDLE EAST TELECOM.

GENAIMESSAGING:

Vertex Al Studio, PalM API

AUTOMATION & MONITORING:

GitHub Actions, Cloud Monitoring

CLOUD INFRASTRUCTURE

Azure

ML & DATA:

Scikit-learn, XGBoost, Pandas, BigQueryassa ut pharetra.

MLOPS & DEPLOYMENT:

MLflow, Flask API, Docker, Vertex AI Endpoints



FOR Questions and Discussion

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