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AUOGE CASE STUDIES

INTELLIGENT AUTOMATION: TRANSFORMING
HEALTHCARE OPERATIONS



CASE STUDY 3

SDOH PREDICTION MODEL

Social Determinants of Health

Developed a machine learning model to predict Social Determinants of Health (SDOH) factors, including housing insecurity, food insecurity, transportation barriers, access to care, and loneliness. It leverages multiple public datasets to identify at-risk individuals, enabling targeted interventions and improved healthcare outcomes.

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KEY FEATURES OF SDOH PREDICTION MODEL



SCALABLE FOR POPULATION-LEVEL ANALYSIS



PREDICTS FIVE KEY SDOH FACTORS



INTEGRATES DIVERSE PUBLIC DATASETS



PROVIDES PROBABILISTIC RISK SCORES



SUPPORTS ACTIONABLE INSIGHTS FOR PROVIDERS



SCALABLE FOR POPULATION-LEVEL ANALYSIS



SDOH MODEL TECH STACK

Developed an ML-based SDOH prediction model using Scikit-learn and XGBoost to identify risks like housing or food insecurity, integrating public datasets (CDC, ACS, CHR) to deliver actionable, scalable healthcare insights.

LANGUAGE

Python

DATA PROCESSING:

GitHub Actions, Cloud Monitoring

DATASETS:

Azure

EVALUATION:

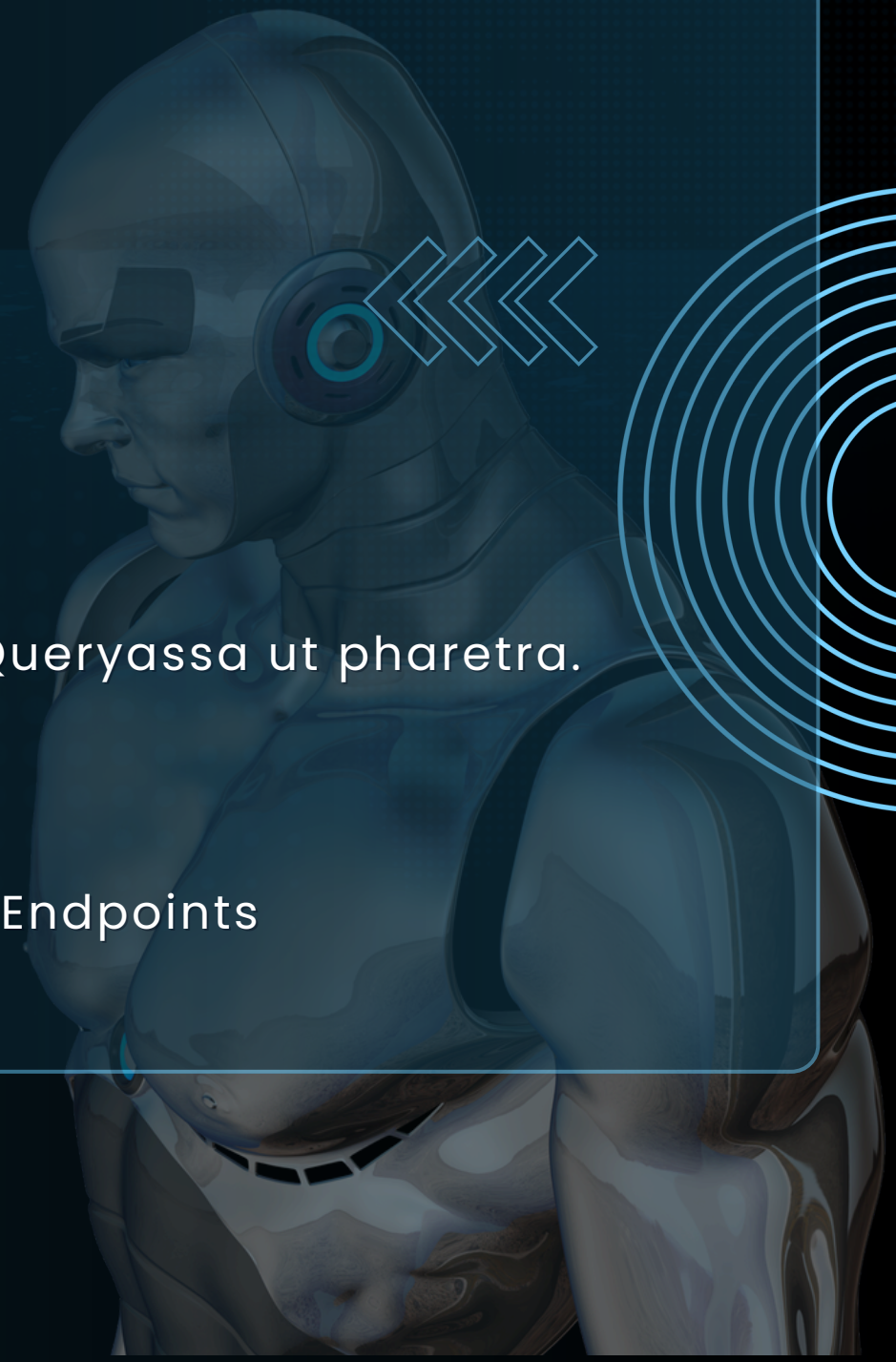
Scikit-learn, XGBoost, Pandas, BigQuery

VISUALIZATION:

MLflow, Flask API, Docker, Vertex AI Endpoints

DEPLOYMENT

Modular pipeline for local or cloud-based execution.



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THANK YOU!

FOR Questions and Discussion

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