

Modernizing Patient-Data Pipelines for United Healthcare



The Customer

A leading US healthcare insurer (United Healthcare) needing timely insights from massive EDI/patient data while enabling analysts/engineers with self-serve advanced analytics.

The Challenge

- Complex, siloed, manual processes with limited automation and governance
- Inadequate data-quality assessment limiting trust and actionability
- Collaboration bottlenecks without a single pane of glass
- Need to scale from local to cloud to accelerate delivery

The Solution

Deploy secure, governed data/ML workflows at enterprise scale on AWS:

- Rapidly connect to S3, DynamoDB, Redshift, RDS; orchestrate on Airflow; scale with EMR
- Provide reusable ETL/ML patterns and collaborative project/workflow sharing
- Embed extensive data-quality checks; enable quick analytical apps and reporting

The Results

- Faster, trustworthy analytics for EDI/patient data
- Streamlined cross-team execution and reuse
- Scalable pipelines supporting 100+ daily jobs
- Tangible reduction in cost and lead time

Impact Delivered

- 80% Reduction in time-to-market
- 70% Increase in user adoption
- 60% Improvement in collaboration
- 15% Overall cost reduction

Solution Components

- EMR
- S3
- DynamoDB
- Redshift
- RDS
- Airflow
- AWS Data Lake