How Data Engineering Enabled a Global Retailer to Achieve Faster Insights and Cost Optimization

INDUSTRY

Retail

CAPABILITY

Data Engineering

FUNCTION

Data Engineering

TECH STACK

AWS

Client Overview

Our client is a Canadian-headquartered global retailer operating nearly 3,000 footwear and accessories stores across 100+ countries.

The Ask

The client wanted to modernize its data infrastructure to support advanced analytics and dashboards while ensuring scalability, cost efficiency, and strong data governance.

Challenges

Cloud Migration at Scale:

While the client had a well-established transactional database, they needed a secure and efficient path to migrate this data into AWS without disrupting existing operations.

Limited Agility in Reporting:

Existing reporting processes were static, making it harder for business users to quickly explore data or adapt insights to fast-changing retail needs.

Manual Data Integration:

Monthly file preparation was heavily manual, creating bottlenecks for teams that required timely and consistent data for analytics.

Our Solution: Centralized Pricing Engine with Real-Time Simulation

Built Secure Data Pipelines

Orchestrated AWS Glue jobs to ingest data from the client's SAP transactional database into Amazon S3. Captured auditing details in DynamoDB and enabled downstream processing via AWS Lambda.

Enabled Scalable Analytics

Established analytical layers using Athena catalog tables and Redshift, allowing business users to query large datasets seamlessly and support advanced reporting.

Automated Monthly File Processing

Implemented a user-centric ingestion process for CSV uploads. Lambda functions triggered AWS Glue jobs to transform raw data, load it into prepared layers, and log activity in DynamoDB for traceability.

Streamlined Infrastructure as Code

Used AWS CDK with Bitbucket pipelines to provision and manage resources automatically, ensuring consistency and agility in deployments.

Delivered Interactive Dashboards

Leveraged Amazon QuickSight to design and deploy dashboards tailored to business functions, enabling self-service analytics and faster decision-making.

Impact Delivered

Fresher Data, Faster Insights:
Enabled quicker updates for always-available, real-time decision-making.

Cost Optimization:
Applied AWS cost-saving techniques like lifecycle rules, Glue auto-scaling, and optimized pipelines.

Proactive Monitoring:
Automated notifications for pipeline issues enabled faster troubleshooting.

Faster Analysis:
Optimized data partitioning and processing reduced query response times.

Optimized Storage:
Automated archiving of redundant data reduced storage costs.

Unlock Faster Insights and Cost-efficient Analytics

START A CONVERSATION

About Us

Tiger Analytics is a global leader in AI and analytics, helping Fortune 1000 companies solve their toughest challenges. We offer full-stack AI and analytics services & solutions to help businesses achieve real outcomes and value at scale. We are on a mission to push the boundaries of what AI and analytics can do to help enterprises navigate uncertainty and move forward decisively. Our purpose is to provide certainty to shape a better tomorrow.

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