



Case Study: One of the Largest Retailers in Europe

Benefits

The solution led to rapid development of data transformation workflows, up-to-date data pipeline, more accurate analytics, enhanced data quality, and improved operational efficiency.

Business Objectives

1. The goal of a leading retail company was to enhance demand forecasting, optimise inventory levels, and personalise customer experiences.
2. They aimed to improve their data transformation processes using a low-code platform.
3. The company intended to replicate real-time data from their SAP systems and generate synthetic data to simulate production scenarios within a shorter timeframe.

Problem

The retailer faced challenges in data transformation due to complex systems and needed real-time data replication with sufficient data volume to simulate production scenarios.

Solution

Cloudaeon Innovation Lab developed a solution combining a low-code platform, real-time data replication, and synthetic data generation. The solution used Databricks Lakehouse and PySpark for data processing and transformation. This enabled real-time ERP data in presentation layer and reporting where it was enriched with data from other systems.

Implementation

- Cloudaeon Innovation Lab initiated the process by setting up a low-code platform that enabled the retailer to design and implement data transformation workflows with minimal coding.
- Connectors were established to replicate realtime data from SAP ERP and Oracle systems, ensuring a continuous flow of data into the transformation pipeline.
- To address the challenge of data volume, Cloudaeon developed advanced generative models to create synthetic data that mirrored real-world scenarios.
- The synthetic data was validated to maintain the statistical properties of the original data.
- The data was processed and transformed using Databricks Lakehouse and PySpark, and organized into bronze, silver, and gold layers for improved management.
- Continuous monitoring tools were implemented to track pipeline performance and promptly address any bottlenecks.
- Real-time reporting was enabled using Power BI and Sigma, providing timely insights for decision-making.