

*Modern Data Lakehouse Analytics in Databricks powered by dbt (Data Build Tool)*

# Healthcare – Leveraging a Lakehouse Platform for Enhanced Analytics and Insights



# Healthcare – Leveraging a Lakehouse Platform for Insights

CASE STUDY

A modern data analytics solution built on Databricks Lakehouse powered by dbt to enhance data capabilities, data quality and enable advanced analytics in healthcare.

## PROBLEM

This healthcare client faced several challenges with their existing data framework, which hindered their ability to leverage data effectively for analytics and business insights.

**Outdated Data Infrastructure:** The client's analytics platform, based on an on-premise SQL Server-based data warehouse, had limitations in terms of scalability, performance, and data processing capabilities. It lacked the flexibility required to handle large volumes of data efficiently.

**Lack of Data Confidence:** Due to the complex data integration processes and transformations involved, the client had concerns about data accuracy, consistency, and reliability.

**Limited Analytics Capabilities:** The existing data framework restricted the client's ability to perform advanced analytics and modelling on their data. This limited their capacity to gain deeper insights, identify patterns, and make data-driven decisions to enhancing patient care and operational efficiency.

## SOLUTION

Exposé collaborated closely with this healthcare client to address their data challenges. Exposé implemented the following solution:

**Lakehouse Platform Implementation:** Exposé recommended the adoption of a Lakehouse platform using Databricks. This modern data architecture combines the best features of data lakes and data warehouses, enabling unified data storage and efficient data processing. Databricks provided a scalable and performant environment for processing large volumes of structured and unstructured healthcare data.

**Transformation Logic Replication using dbt (data build tool):** Exposé replicated the client's existing transformation logic within Databricks using dbt. Dbt allowed for easy tracking, documenting, and testing of data transformations, ensuring data accuracy and consistency throughout the analytics pipeline. This replication process ensured a smooth transition from the legacy environment to the new Lakehouse platform.

## BUSINESS BENEFITS

The implementation of the Lakehouse platform and replication of transformation logic using dbt resulted in significant business benefits for the client:

**Modernised Data Framework:** The transition to the Lakehouse platform provided the client with a data platform capable of handling large volumes of data. This improved data accessibility, processing speed, and storage efficiency, leading to enhanced performance and better utilisation of resources.

**Increased Data Confidence and Transparency:** By replicating the transformation logic in dbt, exposé improved the client's data confidence. This ensured consistency, accuracy, and transparency throughout the data pipeline, increasing trust in the data and enabling more informed decision-making across the organisation.

**Advanced Analytics and Reporting:** The adoption of the Lakehouse platform enables advanced analytics and modelling on their data. With access to a unified and reliable data source, they could leverage powerful analytics tools like Power BI to gain deeper insights, identify trends, and generate meaningful reports.

This enabled the client to make data-driven decisions, optimise patient care, and achieve operational efficiencies throughout the organisation.