



Indium's Databricks Masterstroke: How Indium Empowered A US-Based Healthcare Company with Databricks Implementation for Unmatched PHI Data Protection

SUCCESS STORY

Client Overview

A prominent leader in the healthcare solutions space, the client is a trusted partner for healthcare institutions across the United States, specializing in seamless data archival from legacy EMR and EHR systems. With a wealth of expertise and a proven track record, they entitle healthcare organizations to preserve, access, and manage critical historical data with unmatched precision and reliability. Trusted by numerous institutions, the client sought a solution to streamline data management while adhering to the highest standards of security and efficiency.

The Data Gauntlet: Weathering the Storm of Data Barriers and Compliance Hurdles

The client encountered a series of formidable challenges that demanded immediate and strategic action. From outdated infrastructure to complex compliance requirements, they had to tackle the problems head-on and find solutions that would ensure security, scalability, and efficiency. Each challenge required a delicate balance of technical expertise and precision to navigate.

The client looked to resolve:

- ▶ **Data Migration Hurdles:** Simplify the process of migrating vast amounts of data from the aging on-prem SQL server to the highly scalable Azure Databricks, ensuring a smooth and efficient transition.
- ▶ **Connectivity Breakthrough:** Establish secure and efficient data connections between the client's in-house C# applications and Databricks for seamless integration and real-time data retrieval.
- ▶ **Access Control Fortification:** Strengthen security by implementing Role-Based Access Control (RBAC) to protect sensitive PHI data in Databricks.
- ▶ **Compliance Struggles:** Meet strict compliance standards, adhering to HIPAA and SOC2 compliance while ensuring data encryption and protection mechanisms for sensitive data.
- ▶ **Reporting Roadblocks:** Streamline the integration between Databricks and Power BI for accurate reporting to effortlessly generate accurate, real-time reports and dashboards.

Indium's Winning Formula: Databricks Leads the Way in Smooth-Sailing Data Transformation

Azure Databricks, being a robust and high-performance Apache Spark-based analytics platform, stands out as the backbone of this project, offering a powerful, fast, and collaborative environment for big data processing and advanced analytics.

Through an extensive review of the challenges, Indium spearheaded a comprehensive end-to-end migration of over 500GB of critical SQL Server data (Clinical, PHI and hospital data) to the powerful Azure Databricks. This powerful solution made all the difference, transforming the data landscape with a smooth, efficient, and scalable transition. The outcome? A seamless, efficient, and scalable transition that laid the foundation for a high-performance data infrastructure—designed not just for the present but for future growth and innovation.

From SQL Server to Databricks: Flawless Migration & Data Validation

Indium executed a comprehensive end-to-end migration of over 500GB of critical SQL Server data (Clinical, PHI and hospital data) to Azure Databricks, ensuring a smooth transition. Along with this, meticulous row-level data validation was performed for every table, ensuring data integrity across diverse types and formats.

Precision in Data Integrity: Ensuring Every Row is Validated

With an unwavering commitment to data accuracy, we meticulously performed data validation on every row, covering a wide array of data types—String, Char, Varchar, datetime, Bigint, Smallint, float, money, decimal, and beyond. This rigorous process ensured flawless data integrity across the board.

Modernizing Legacy Processes: Rewriting Stored Procedures for the Future

The challenges of legacy systems were tackled by reengineering SQL Server stored procedures into efficient functions within Azure Databricks. This modernization effort unlocked enhanced flexibility and performance for the client's data workflows.

A Fortress for Data Privacy: HIPAA & SOC2 Compliance Achieved

Security and compliance were top priorities in this project. Indium implemented 256-bit AES encryption for data at rest—an inherent feature of Databricks. This strategic move ensured the client adhered to stringent HIPAA and SOC2 standards, safeguarding sensitive data against unauthorized access.

Real-Time Insights: PowerBI Integration for Dynamic Dashboards

By harnessing Databricks' full potential, a seamless connection to the platform was established. This enabled the client to pull data from PowerBI effortlessly and generate dynamic, real-time reports and dashboards. This empowered data-driven decision-making and significantly boosted business intelligence capabilities.

Resilient Infrastructure: Optimized Backup & Disaster Recovery

The team configured robust backup and disaster recovery mechanisms to ensure business continuity using Locally Redundant Storage (LRS) and Geo-Redundant Storage. This strategic setup guaranteed high availability and resilience, providing peace of mind in the face of any unforeseen challenges.

Data, Done Right - Results That Break New Ground

Indium's solution turned the tide for the client, delivering results that set the bar high - driving unprecedented efficiency and securing data with airtight precision.

► **Cost Optimized 2X with Databricks:**

Databricks implementation drove a 2X cost reduction, streamlining operations and maximizing efficiency. A game-changing solution that cuts costs without compromising performance.

► **HIPAA Compliance Secured, Data Shielded:**

Databricks ensured HIPAA compliance, safeguarding data with unrivalled privacy and security. Sensitive information was fully protected and handled with the highest standards.



About Indium

Indium is an AI-driven digital engineering company that helps enterprises build, scale, and innovate with cutting-edge technology. We specialize in custom solutions, ensuring every engagement is tailored to business needs with a relentless customer-first approach.

Our expertise spans Generative AI, Product Engineering, Intelligent Automation, Data & AI, Quality Engineering, and Gaming, delivering high-impact solutions that drive real business impact.

With 5,000+ associates globally, we partner with Fortune 500, Global 2000, and leading technology firms across Financial Services, Healthcare, Manufacturing, Retail, and Technology—driving impact in North America, India, the UK, Singapore, Australia, and Japan to keep businesses ahead in an AI-first world.

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