A FAST-GROWING SINGAPORE BASED ENTERPRISE IMPLEMENTED DATA GOVERNANCE FOR EFFICIENT DATA MANAGEMENT AND BUSINESS ANALYTICS

CASE STUDY

ZUCI SYSTEMS

AN ENTERPRISE DATA LAKE & PIPELINE CASE STUDY

With a vision to simplify data governance, a fast-growing big data and AI company in Singapore achieved high-quality, fast, and efficient data management with a powerful data pipeline solution.

PROBLEM STATEMENT

Founded in 2012, our client is a fast-growing big data and AI company with a vision to simplify the world's choices and believes that data is meant for everyone to see, touch and use the information to make a difference.

In order to achieve that, the client wanted to build a robust infrastructure that will enable them to collect data (transactions, logs, emails, etc.) across disparate data sources and bring all the data sources into a data bank to enable quants, data scientists and data engineers to create data pipelines and further enhance it for quantitative analysis, reporting analytics and enforce machine learning. The client also wanted to set up a fast feedback loop and batch process using APIs in a cloud-agnostic manner.

Lastly, the client wanted the infrastructure to be scalable to support and forecast growth, with high performance for their end customer analytics, and was on the lookout for a business intelligence partner for end-to-end implementation and support.

BUSINESS GOALS

Capture and store raw data at scale

Integrate and expand current enterprise data warehouse

Eliminate data silos, support structured, semi-structured, and unstructured data

Democratized access to data via a single, unified view of data across the organization

Derive value from disparate data sources to arrive at real-time decision analytics

Full control over data security and governance

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SOLUTION

Our team of highly experienced business intelligence team tailored an infrastructure that helped set up a data ecosystem (data lake and data pipeline) to host different types of data along with a system catalog that will present metadata for the disparate data sources.

Based on the technical needs to enable the data lake, our business intelligence architects engineered data pipelines with a standard layer of abstraction that operates on one single monolithic space.

This infrastructure helped interact with different programming paradigms. Also, it parallelly supported disparate data sources by integrating with a cloud computing environment across applications for efficient data management and providing a self-service analytics dashboard to view customer insights and forecast growth.

HOW ZUCI SYSTEMS HELPED

Developed an architecture to monitor incoming data (whether file-based, streaming, or any other types)

Connected & transformed data from each source to match the format and schema of the destination

Transferred the data to the target data lake/data warehouse

Enabled adding and deleting fields and altering the schema as client requirements change

Provided stakeholders with a self-service analytics dashboard to view customer insights and forecast growth

Ongoing commitment to maintaining and improving the data pipeline

Provided a walkthrough to the client after end-to-end installation

Continuous support to stakeholders with workshops and Q&A sessions

BUSINESS OUTCOME

100%
control over data

150%
data security & governance

63%
reduction in maintenance cost

45%
revenue growth

ROI realized in
3 months

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TECH STACK

python™

APACHE POI

LOW-CODE BASICS

Java JVM (Java Virtual Machine)

REST-assured TESTING FRAMEWORK

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