



Sygnos **DB**

An Intelligent Database

Data Sheet.

Designed bottom-up to speed up data integration for analytic platforms, SygnosDB utilises graph technology to enable large-scale integration of various data sources into a unified schema for rapid data ingestion, warehousing, and analysis. It employs machine learning algorithms to automatically recognise the concepts and objects, build their relationships, and apply an extensible ontology to structure the data more consistently than traditional database management solutions.

AI-powered Database

The challenge of employing legacy database systems in AI pipelines lies in their inability to work with inconsistent data structures. Different data sources might have different definitions and relations for the same objects or concepts, which have to be traced and transformed to create a unified dataset.

SygnosDB overcomes this challenge by automating the tracing and transformation process to create self-consistent data frames as defined by a single ontological definition. This process happens in the background with minimal supervision using various machine learning algorithms to iteratively maintain data consistency. This resulted in improved operational efficiency, faster query performance and accuracy, and simplifying database management processes.

Efficient Data Warehousing

Graph database relied on having multiple schema for different relationships between the variables stored, which means that a single piece of information will be stored differently in different tables according to their relationship in these separate tables. Graph database simplified this process by creating a unified schema to define the various objects and concepts, and their relationships in a property graph schema.

SygnosDB takes it a step further by integrating the object representation of the data stored in the system, transforming the various objects and concepts into representative indices and model them as a hypergraph. Not only does this process reduced the amount of data stored, it also enabled a faster search-and-retrieval process for any information stored in the database.

A Living Data Ecosystem

The purpose of adopting a data lake is to create a continuously expanding pool of knowledge, one that allows information to be analysed as they were stored. SygnosDB takes the best qualities from both data warehouses and data lakes. By giving a unified structure to various unstructured data during ingestion, it maintains data consistency as the system ingests different data as they came, allowing organisations to expand their data collection while maintaining a consistent schema.

This schema has the flexibility of noSQL database systems, but maintains the consistency of relational database systems, easily taking the best qualities of both solutions. Organisations can define and expand the schema at any time, and the system will restructure the relationships as required, allowing a degree of flexibility that data lakes have, while maintaining the curation structure that relational databases offered.

Better AI Pipelines

AI platforms often suffer from the fluctuating quality of the data they processed. SygnosDB overcame this problem by ensuring the consistency of data delivered to the AI systems. By self-monitoring the data quality, and ensuring the internal consistency of the data managed in the database, data analysts and AI engineers wouldn't have to worry about the changes in the system, as the data they process will continue to follow the schema they defined. This enables faster development iterations, as AI engineers and analysts would only have to focus on the model they build instead of worrying about the data they process.

Product Portfolio

Creating an integrated data is a process where our engine not only put different data in one database, but also creating a rich set of features where the data can be searched and retrieved in a timely manner, to provide a robust set of information for the users. For that purpose, we present the five core capacities of our product line, as follows.

For Further Information, Please Contact:



Omni Global Technologies, PTE. LTD

105 Cecil Street, #13-01, The Octagon

Singapore 069534 | +65 3157 1823

marketing@omniglobaltech.com.sg