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VIRTUAL SUMMIT SERIES
DATA & ANALYTICS

Blurring the Boundaries of Data Engineering, Knowledge Management, and the Way we Work – a Tale of OpenAI

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Tuesday, September 12, 2023

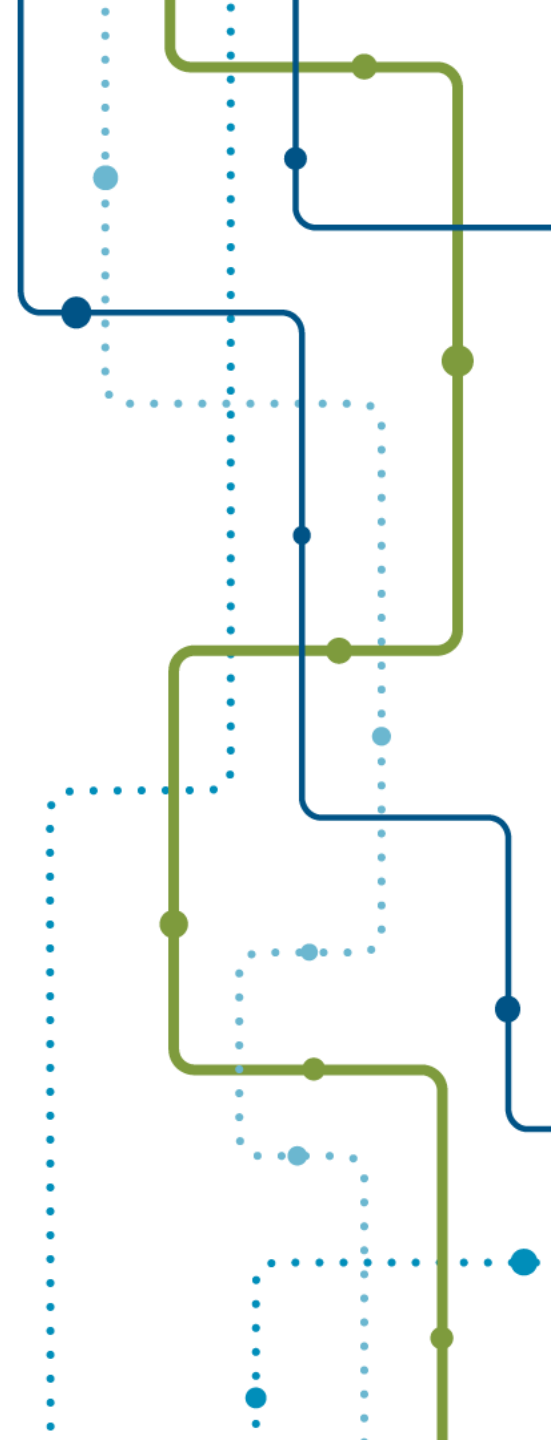
Let's start a journey through time...

Good day, ladies and gentlemen! Thank you for joining us on what promises to be an exhilarating adventure.

Imagine, for a moment, that we are all together on a time machine journeying through the corridors of time and technology.

We will start with the relentless wheel of innovation that has shaped our modern world, and go into the vast, almost incomprehensible future.

Today, you're not just an audience; you're fellow time-travelers. So, fasten your seatbelts, open your minds, and let's embark on an expedition of discovery!



In the beginning, there were books...

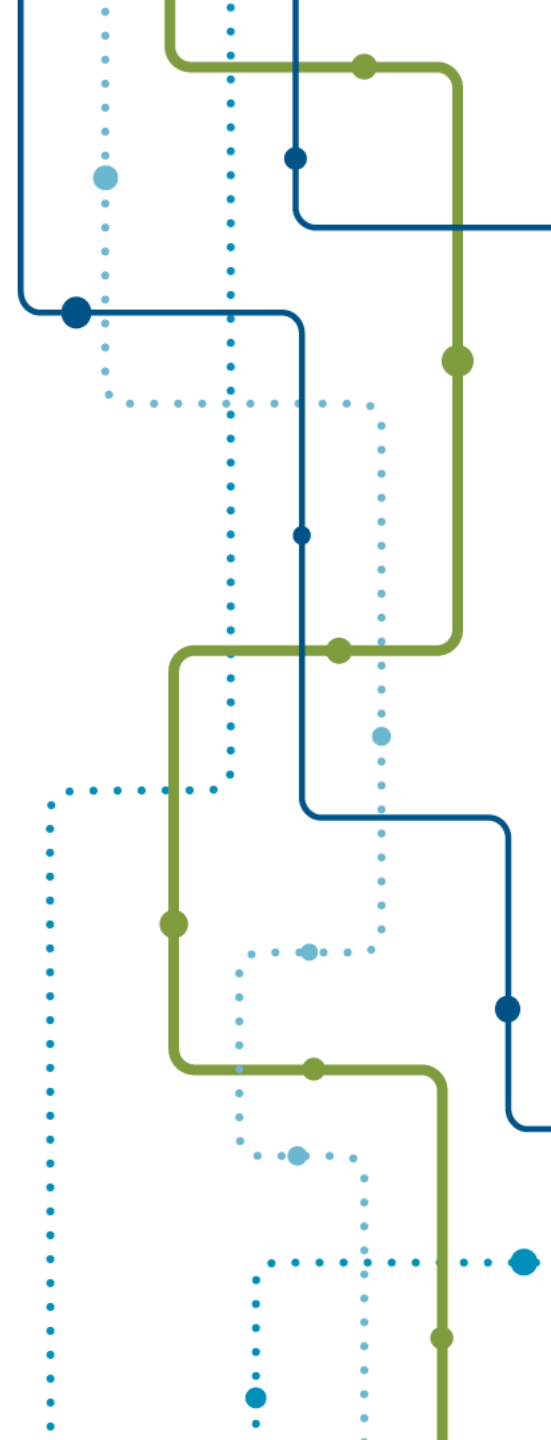


Retrieval was the name of the game...

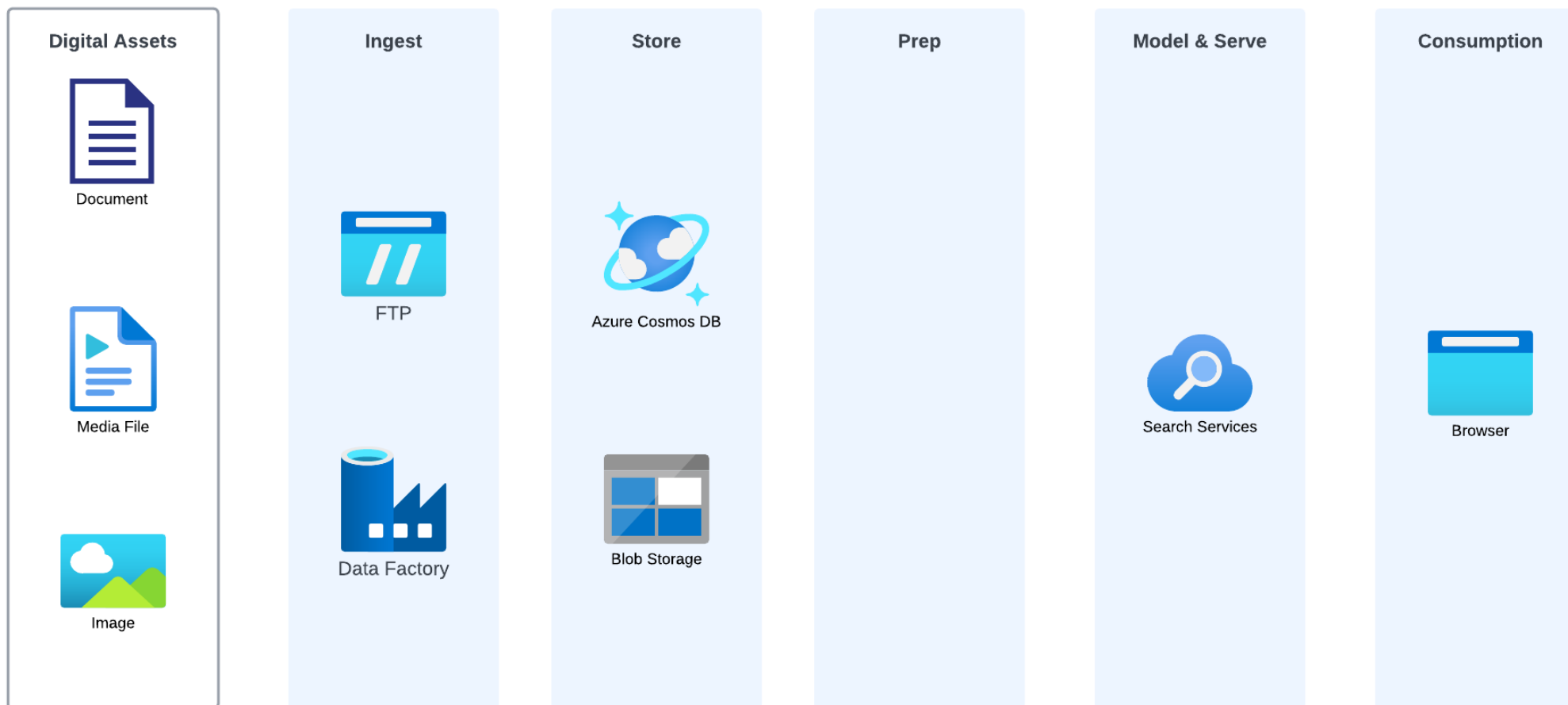


But what has happened since then...

- Introduced in 1873, the Dewey Decimal System is constantly under revision and expansion.
- In the early 1990s, a new scientific discipline, Knowledge Management, emerged focused on managing and maximizing intangible (unstructured) assets in enterprises.
- Knowledge management paved the way for technologies that classify data & documents, retrieval techniques for unstructured assets, collaboration tools, and information-sharing systems.



Typical Modern Retrieval System



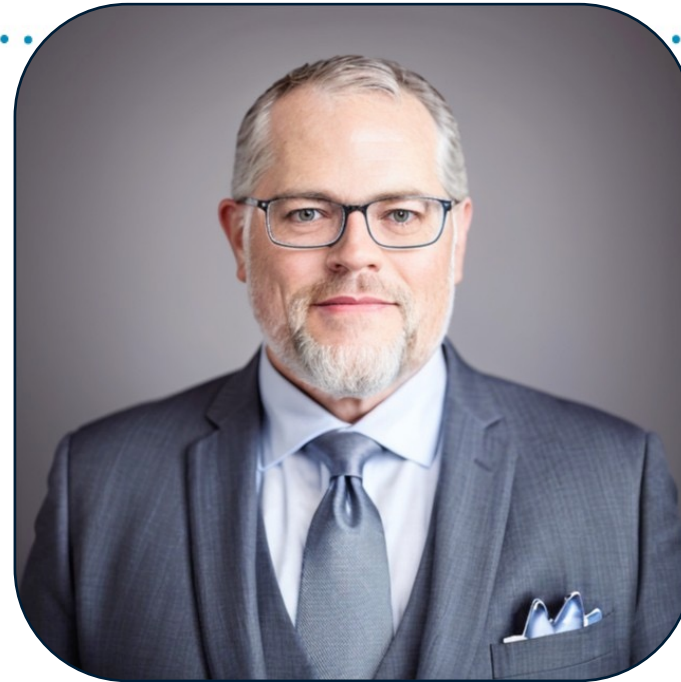
Retrieval has come a long way...

But this is only the beginning...



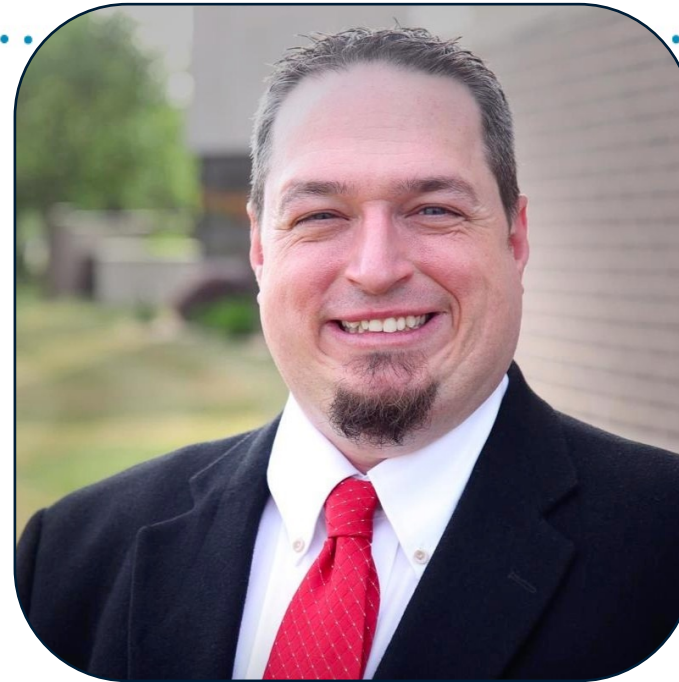
David Tyler

Senior Director of Data & AI



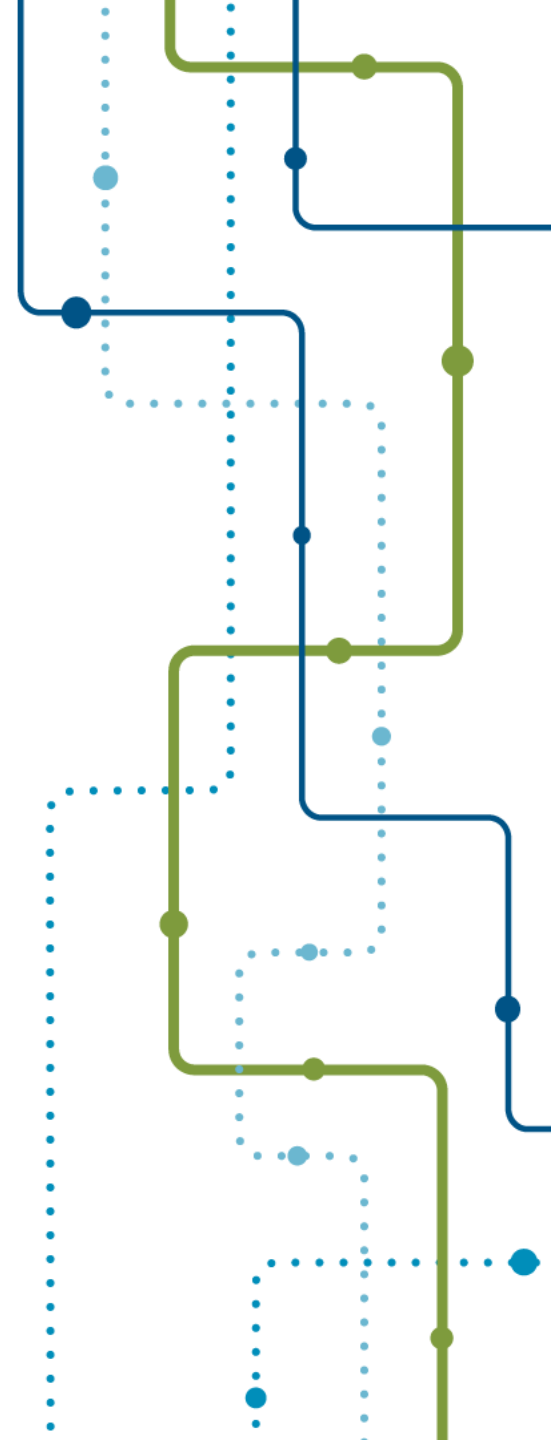
Jimmy Ledbetter

Chief Strategist for Generative AI



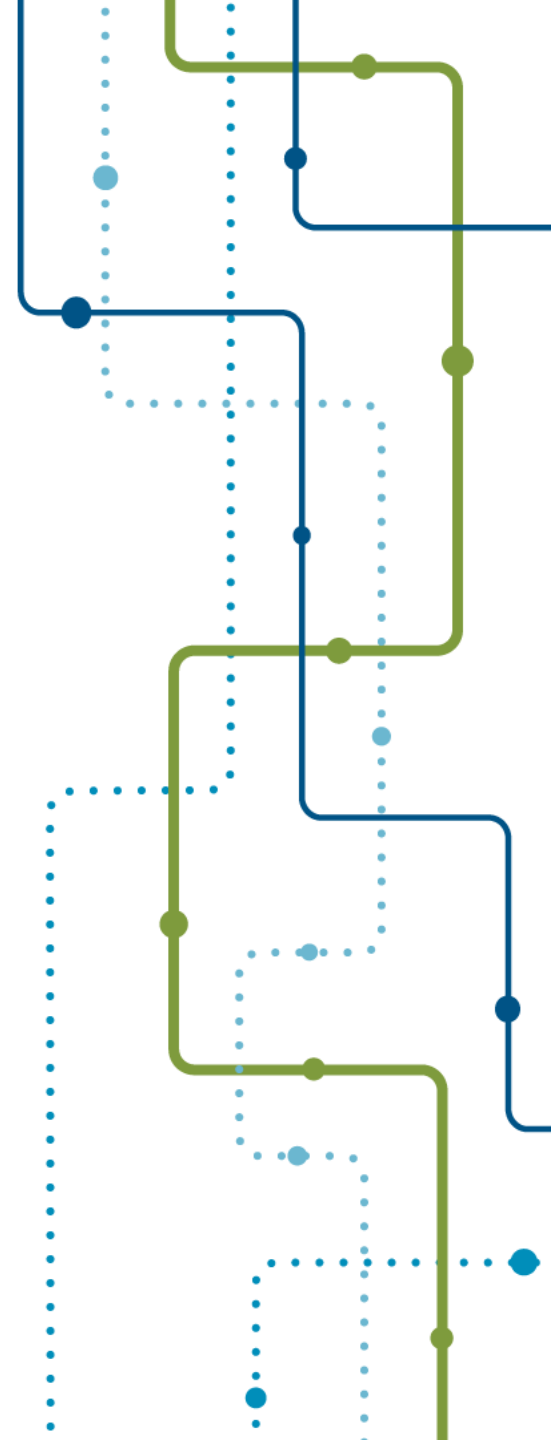
Then there is data engineering...

- The first data table was produced in 230 AD, called “Ulpian’s Life Table”.
- The term “data” was first used in English back in the 1640s.
- The first significant data engineering achievement did not occur until the 1880 US census.
- SQL programming language was invented in 1974.

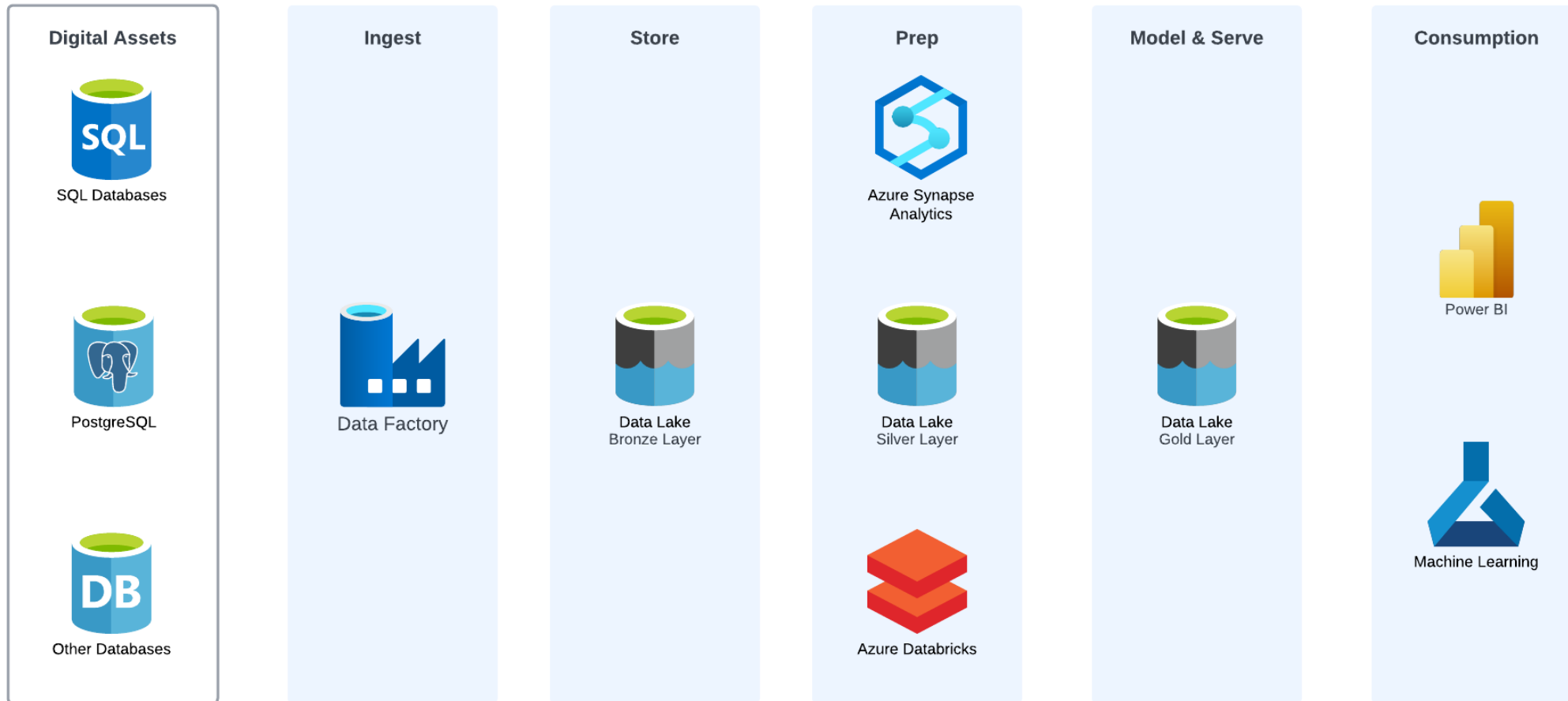


Data Engineers...

- Build structured assets that optimize the storage, management, and approach to data.
- Create linkages between disparate data sets that form informational gateways.
- Analyzing vast quantities of data in fast, verifiable, and reliable means.
- But are restricted to the structured content they can create or manipulate.



Typical Modern Data Platform



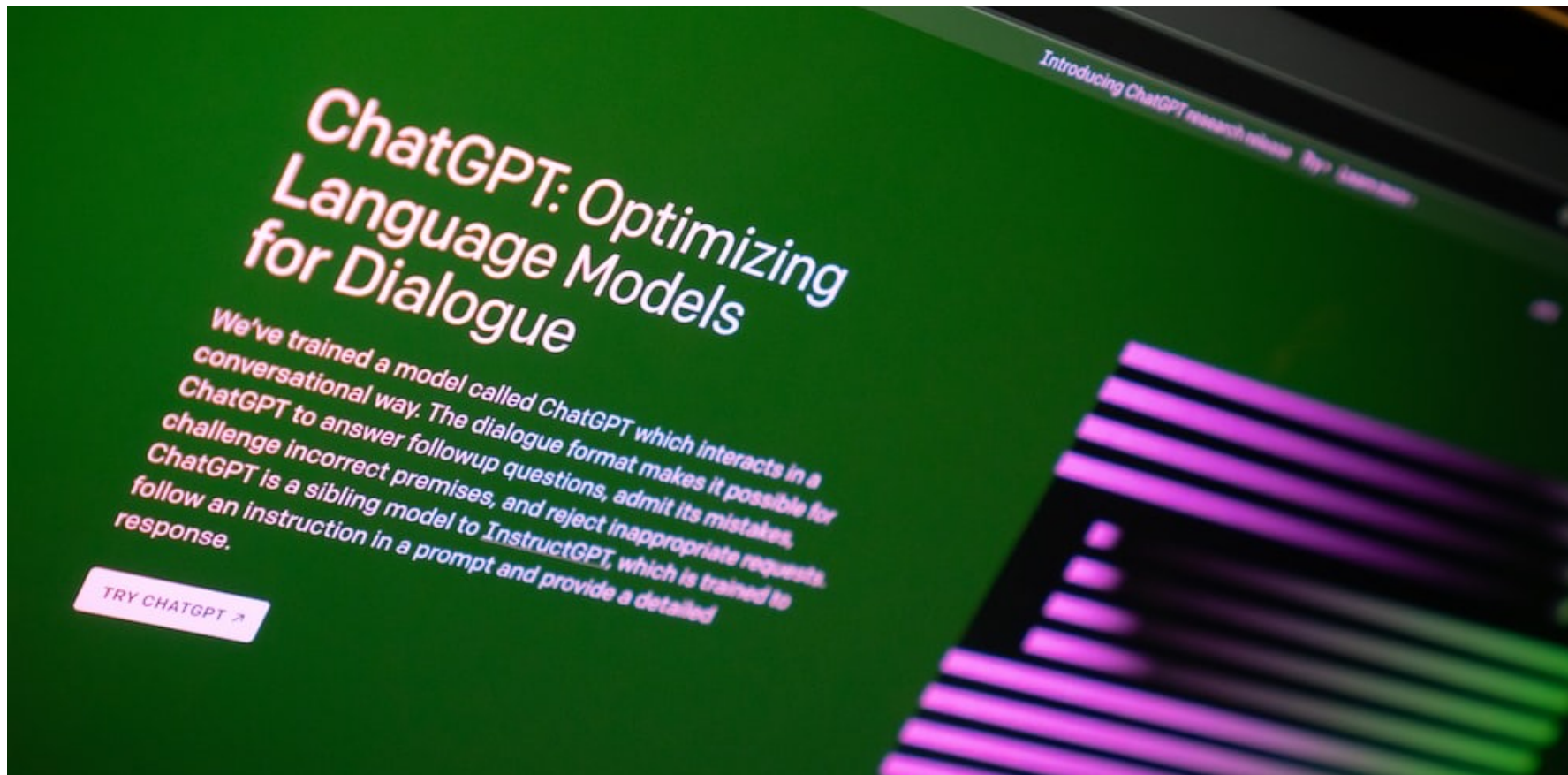
This only highlighted problems...

- Retrieval of unstructured assets was different than structured assets.
- Unstructured assets could not be interrogated, only reviewed, and consumed in their stored format.
- Structured assets could be interrogated and transformed into other types of assets – reports!
- Structured assets were the only assets that could provide insights or find patterns not explicitly provided within by the asset itself.

If only there were a way...

- **Retrieve** structure and unstructured assets the same way...
- To interrogate and **augment** all assets to find insights or patterns...
- And **generate** outputs for consumption in various formats or mediums...

OpenAI Changed EVERYTHING...



New Generative AI Architecture



OpenAI's Superpower...



Now there is a way...

- **Retrieve** structure and unstructured assets the same way...
- To interrogate and **augment** all assets to find insights or patterns...
- And **generate** outputs for consumption in various formats or mediums...

And with newfound powers...



Prompt Engineer

- Typically, is more analytical and less technical.
- Strong understanding of business processes and problems.



Vector Engineer

- Typically, is more technical.
- Strong understanding of data engineering space.
- Works closely with businesses to identify indices to build.

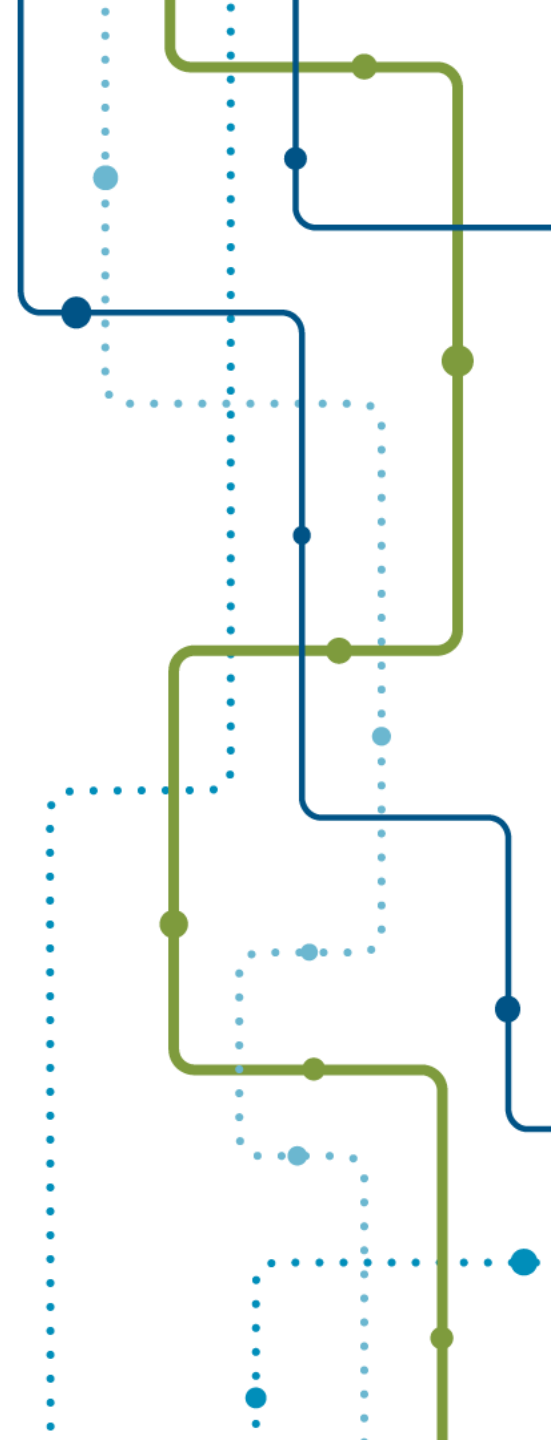


Document Engineer

- Typically, is more business-focused and less technical.
- Identify documents to ingest.
- Use different cognitive services to ensure documents are ready for ingestion.

And what about tomorrow...

- Businesses will transition from single intelligent agent scenarios to multi-intelligent agents using multi-modal Generative AI solutions.
- Low-risk repetitive tasks will be automated entirely using multi-modal Generative AI solutions.
- Generative AI will create, action, and manage experimentation of new market segment development.





Questions & Answers

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