

# Application-Driven Intelligence

Defining the next wave of modern apps



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MongoDB Partners Team

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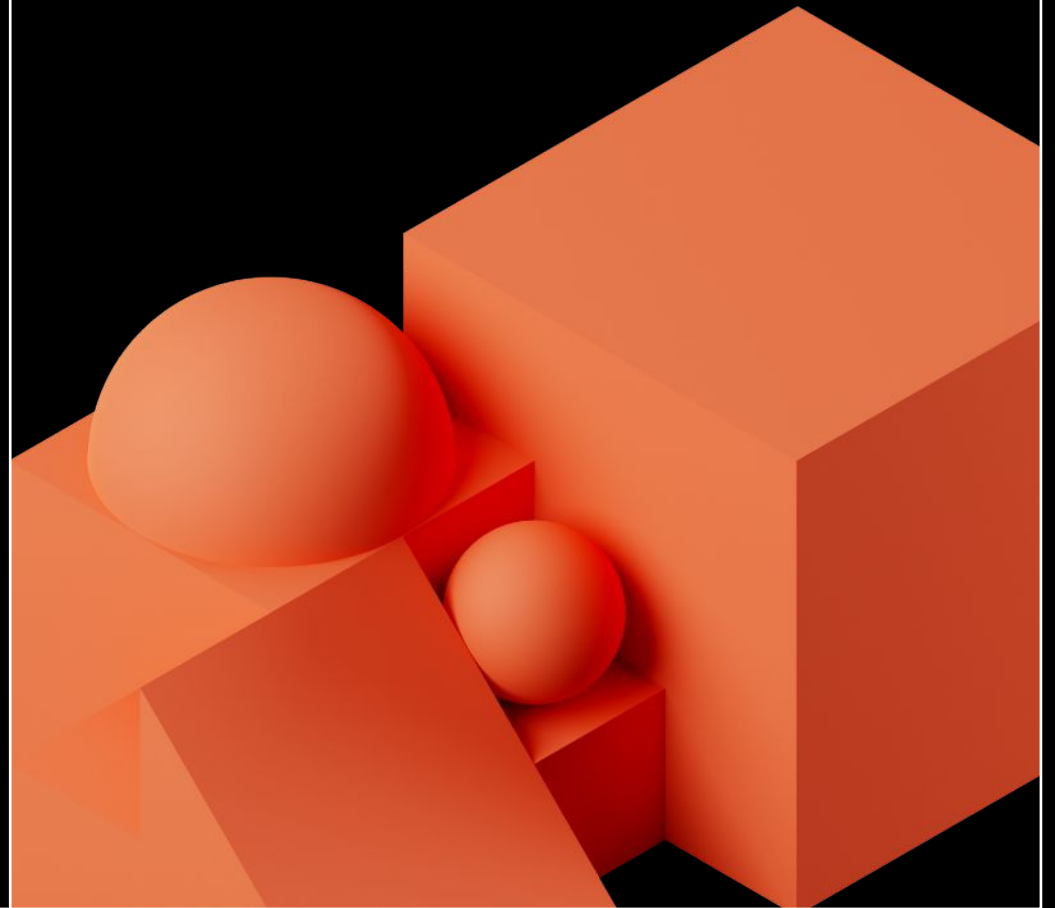
Databricks  
2023



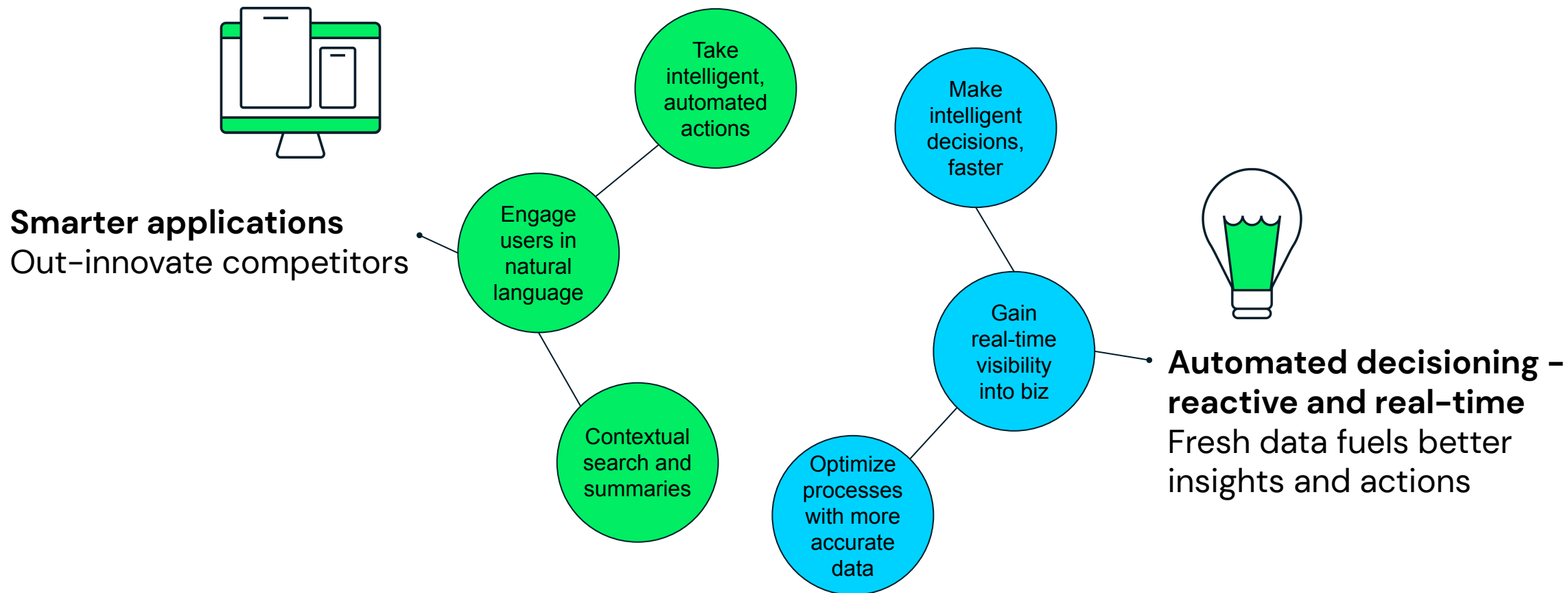
# Agenda

- Defining application-driven intelligence
- Use cases and required capabilities
- Demo: Retail architecture for personalization and dynamic pricing
- How to get started

# Defining app-driven intelligence



# Competing and winning in the digital economy



# New opportunities across every industry



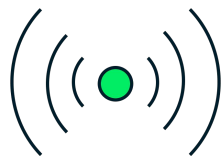
## Retail

Smarter Apps

Hyper-personalization

Decisioning

Dynamic pricing



## Telco

Smarter Apps

Support chatbot

Decisioning

Network optimization



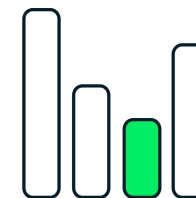
## Healthcare

- Fitness tracking
- Longitudinal health record



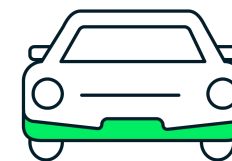
## FSI & Insurance

- Payment processing & fraud
- Underwriting



## Gaming

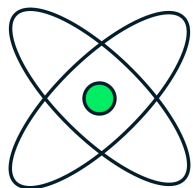
- Audio processing
- A/B feature testing



## Manufacturing

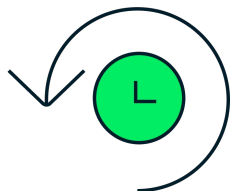
- Question-Answering
- Predictive maintenance

# What do all of these use cases have in common?



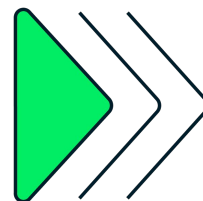
## **Live app data**

<5 seconds old  
Constantly updated



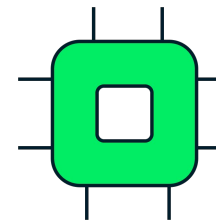
## **In the app flow**

<1 second response  
latency



## **At app scale**

Supports thousands+  
concurrent users

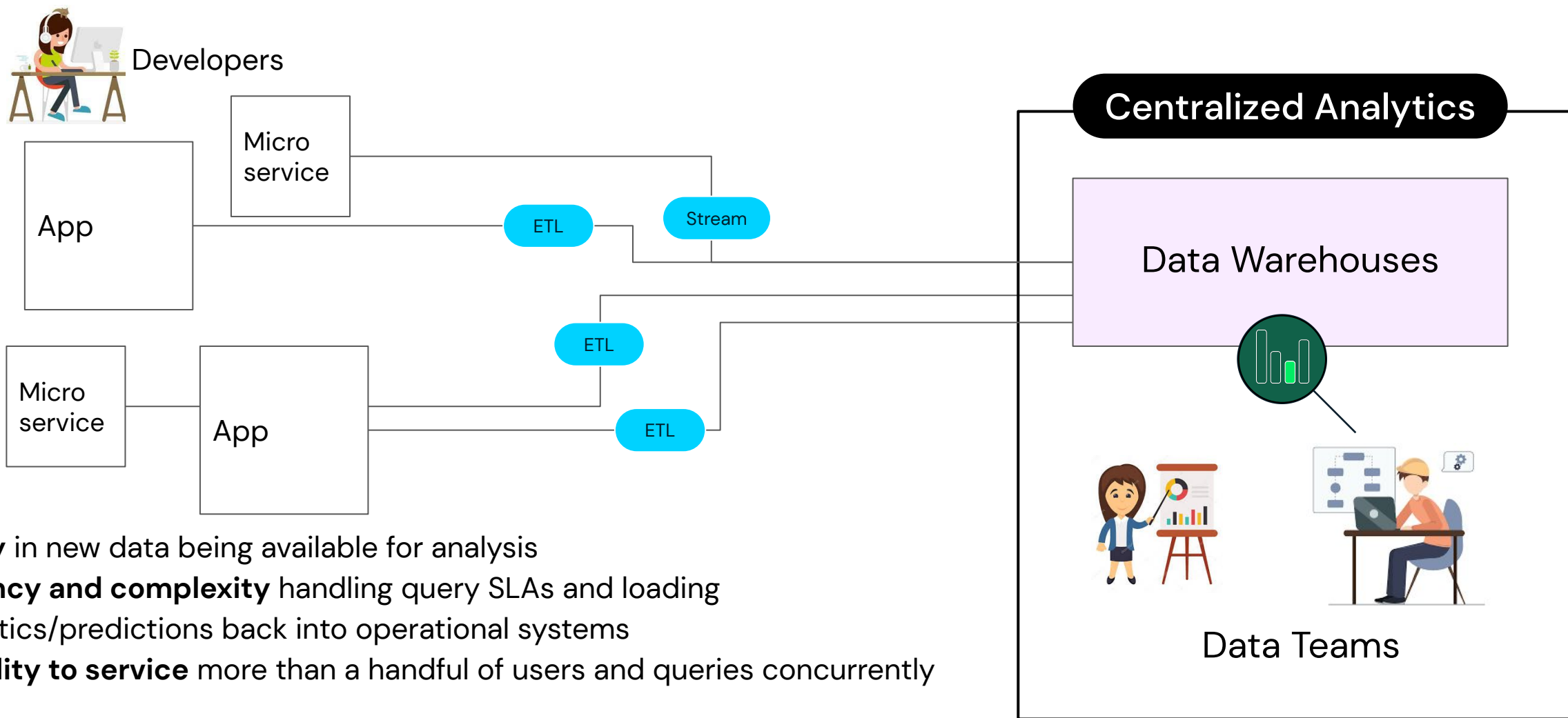


## **App automation**

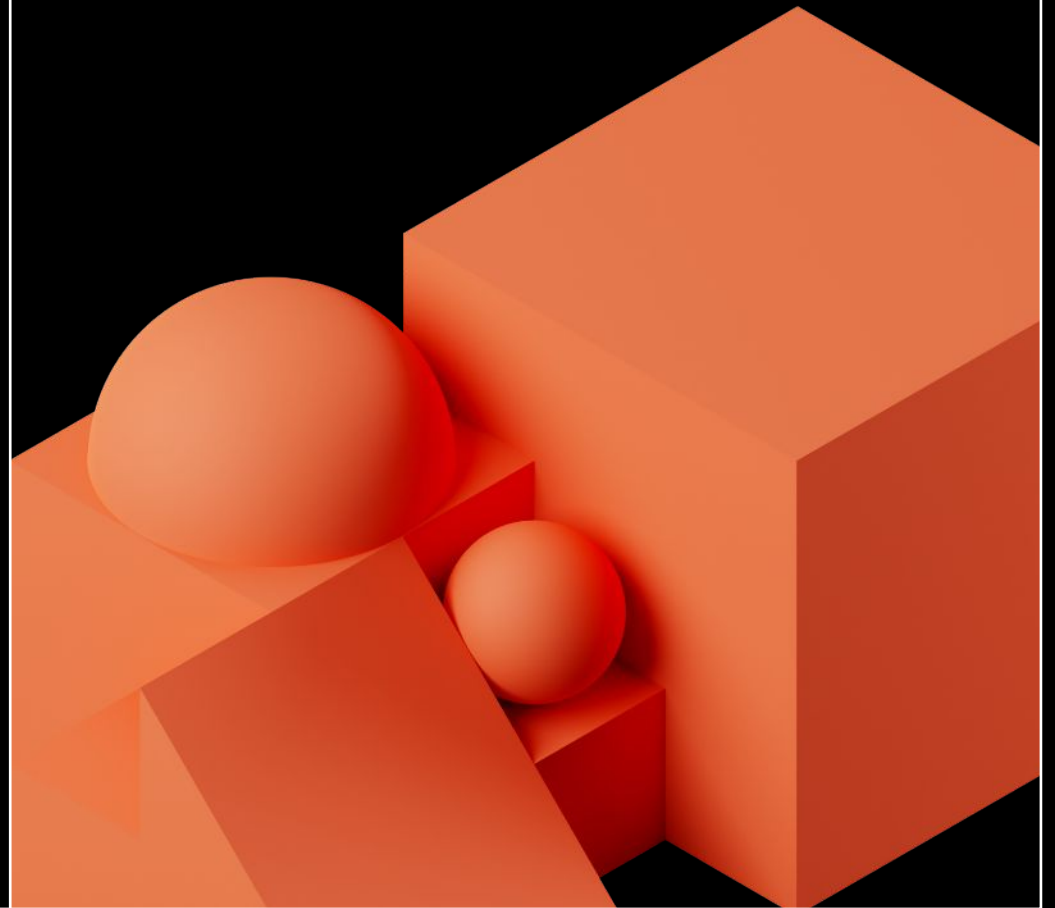
Outputs consumed by  
software and algorithms

Built with collaboration between  
app developers and data teams

# Traditional separation of domains breaks down

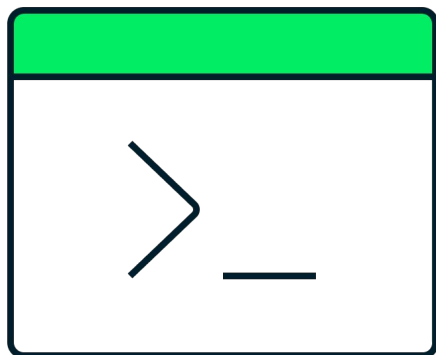


To bring analytics  
and AI into our  
applications,  
what do we  
need?





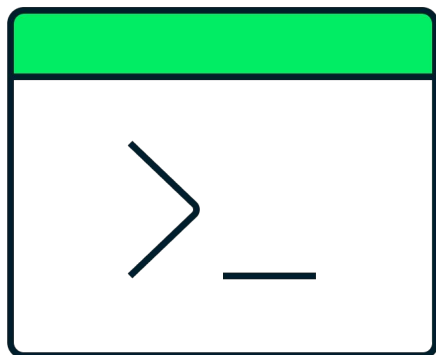
# App-driven intelligence: Developers



Developers need:

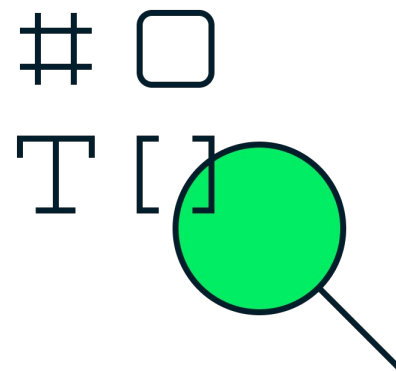
- Tools & APIs to build sophisticated queries
- Analytics-optimized storage & indexing
- Programmatic APIs & connectors for integration with models and MLops

# App-driven intelligence: Data teams



Developers need:

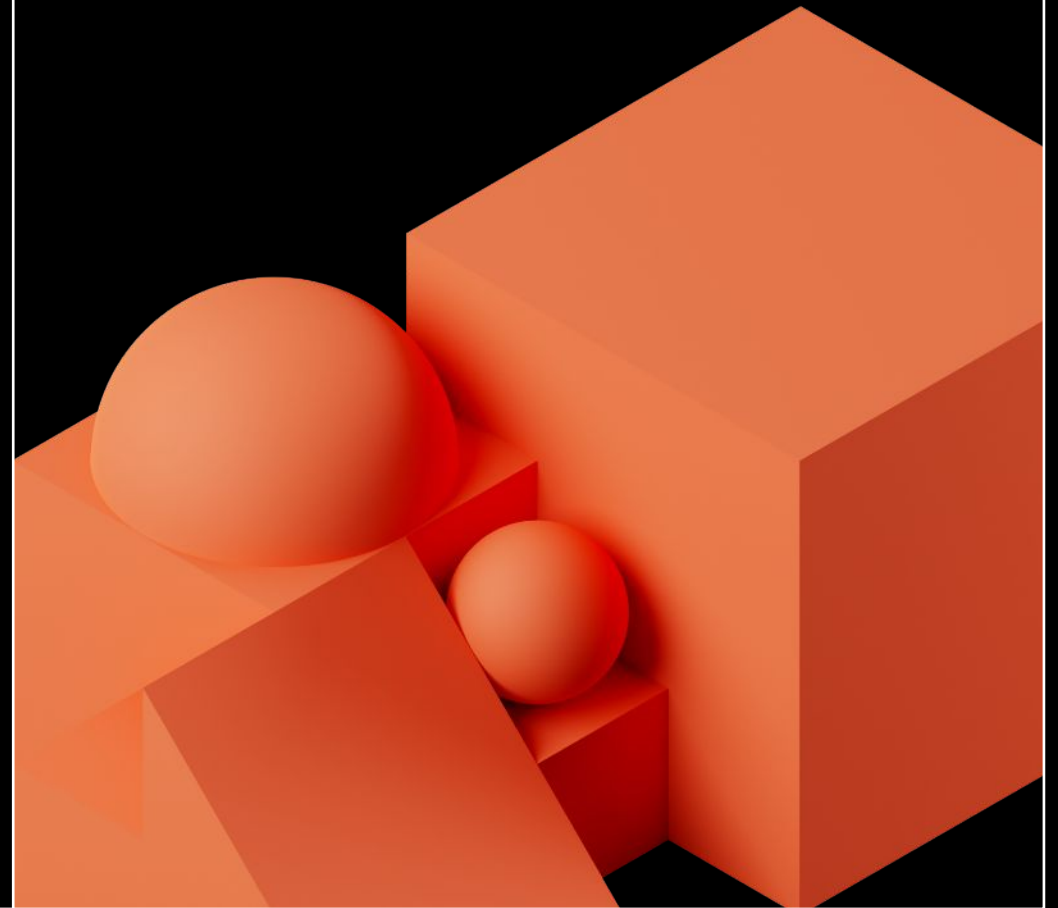
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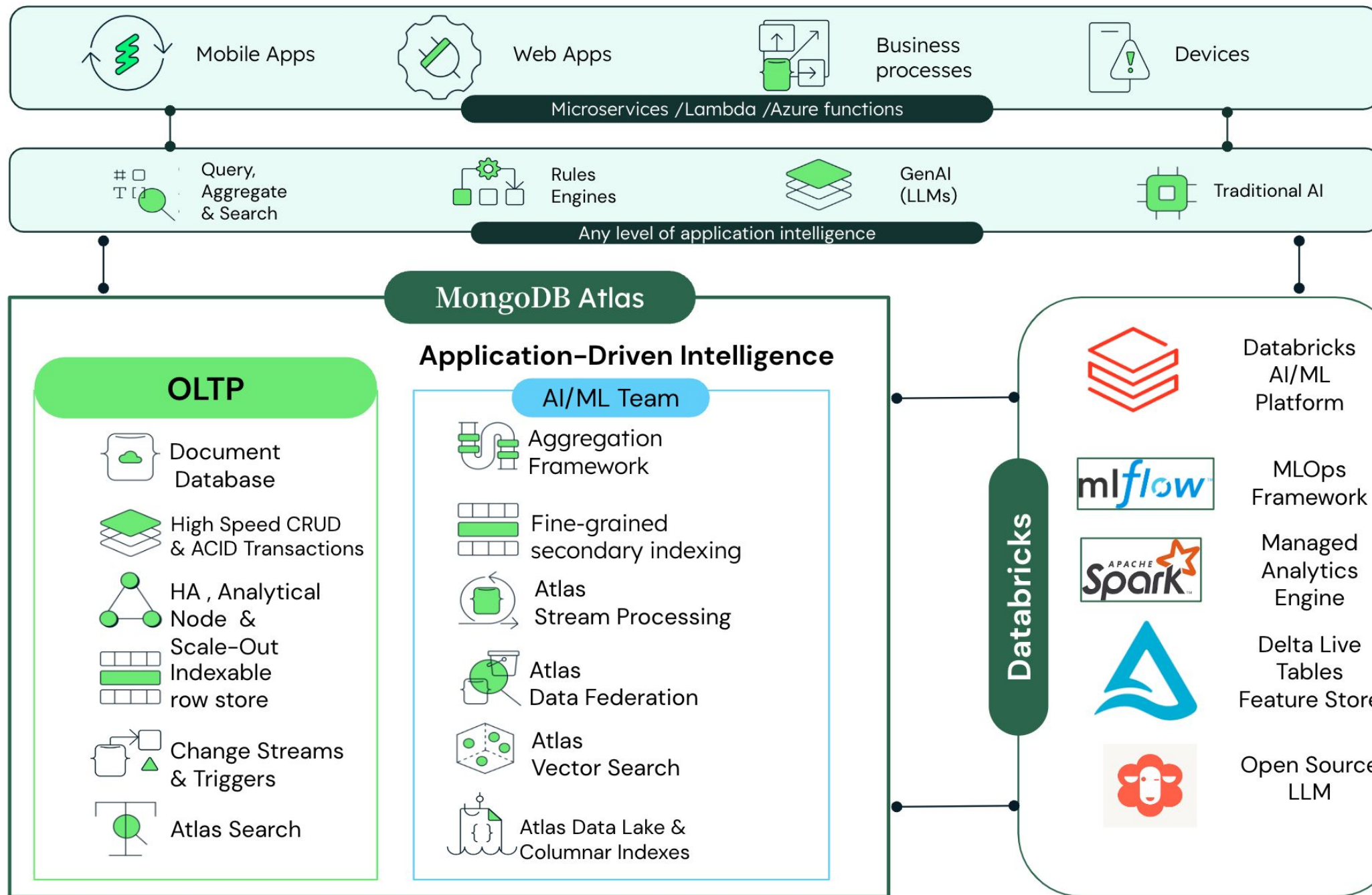


Data teams need:

- Direct access to raw & messy app data
- Familiar tools and skills
- Isolation from live app

# MongoDB Point of View





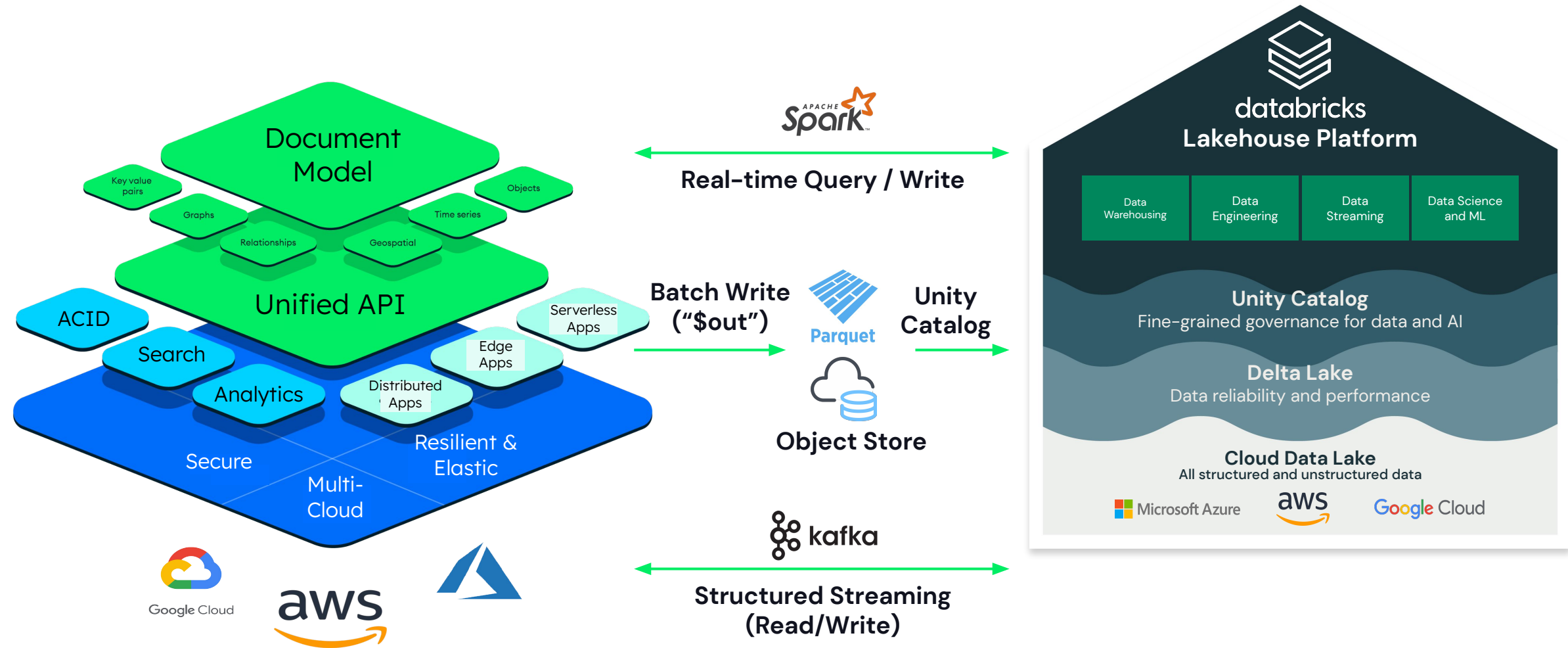
“Data needs to be analyzed as close to the source as possible and in real time. From my history [of doing this for] 22 years, we never had the capabilities to do this before.”



Kai Habbarth,  
Sr. Technology Evangelist,  
Bosch Global Software, IoT

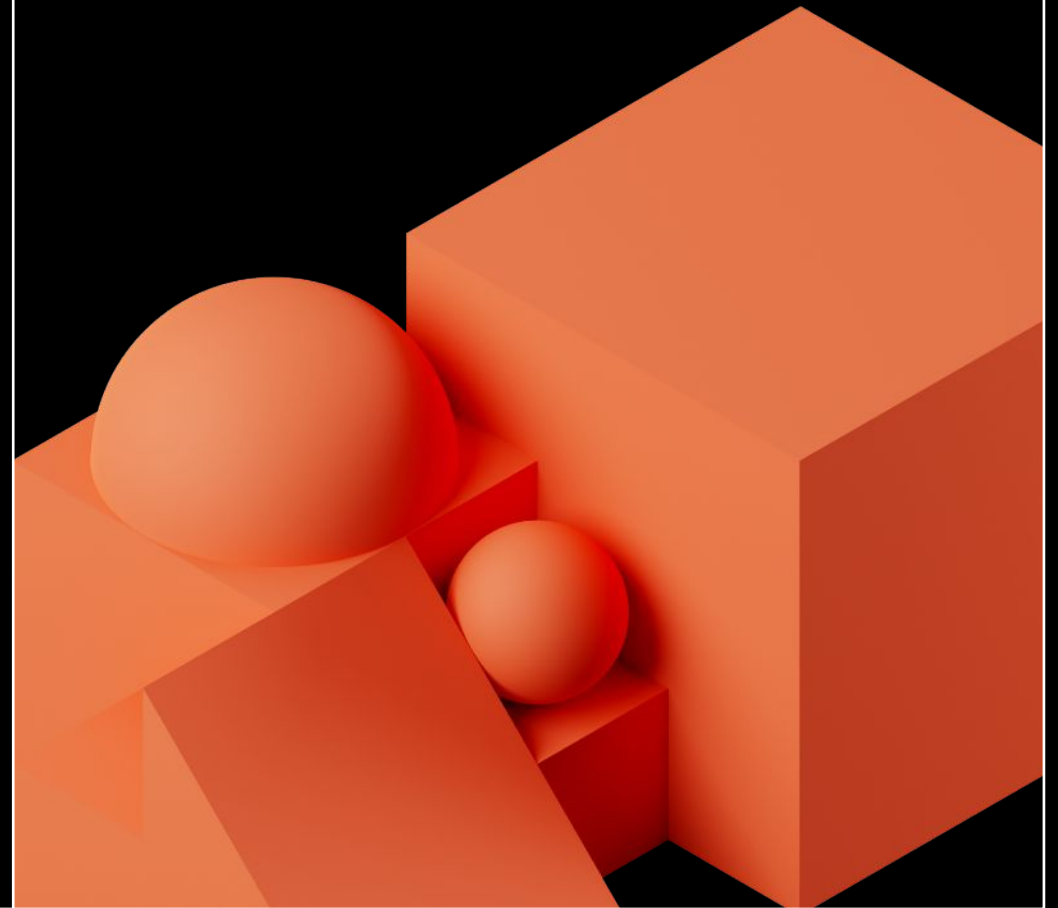


# MongoDB and Databricks Integration

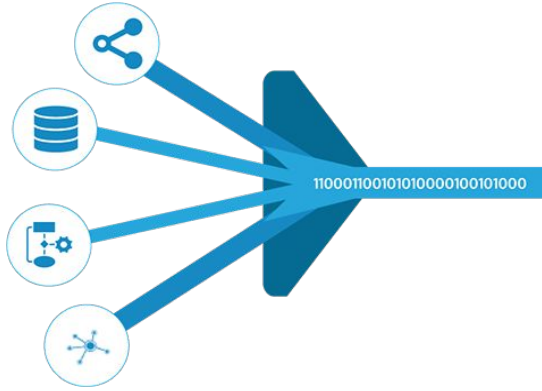


# App-driven intelligence in action:

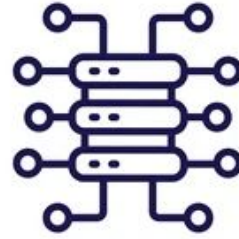
Retail demo for  
personalization  
and dynamic pricing



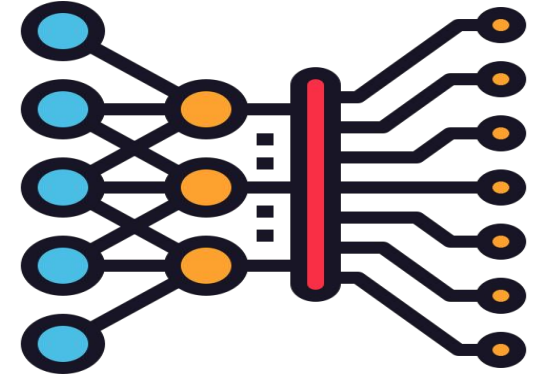
# Components In Ecommerce Retail Architecture



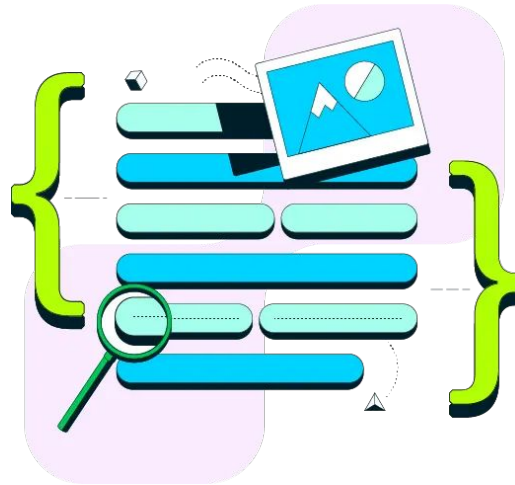
Multi-tenant  
streaming ingestion



Stream processing



AI/ML modeling

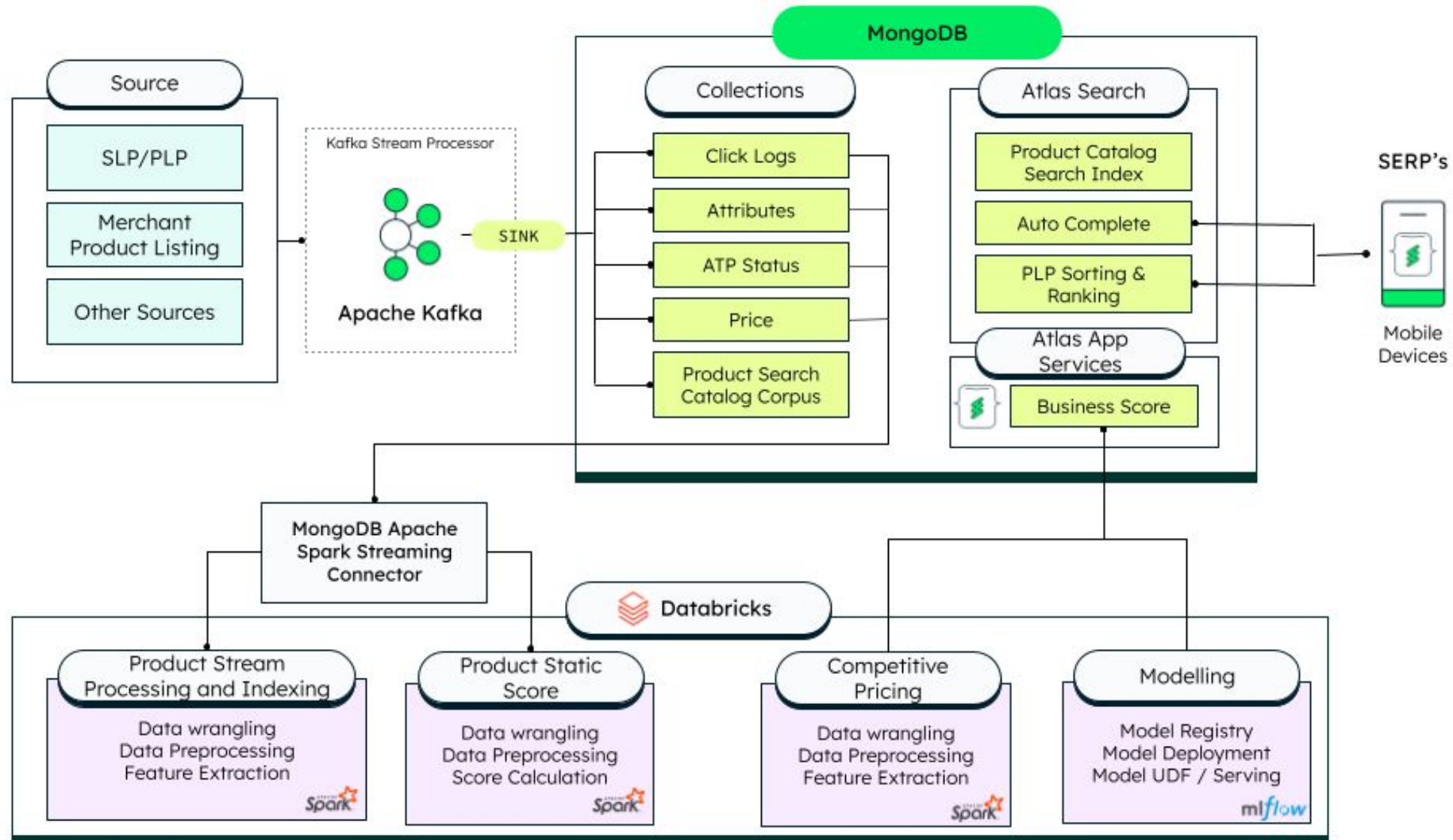


Operational Data Store

Full text Search



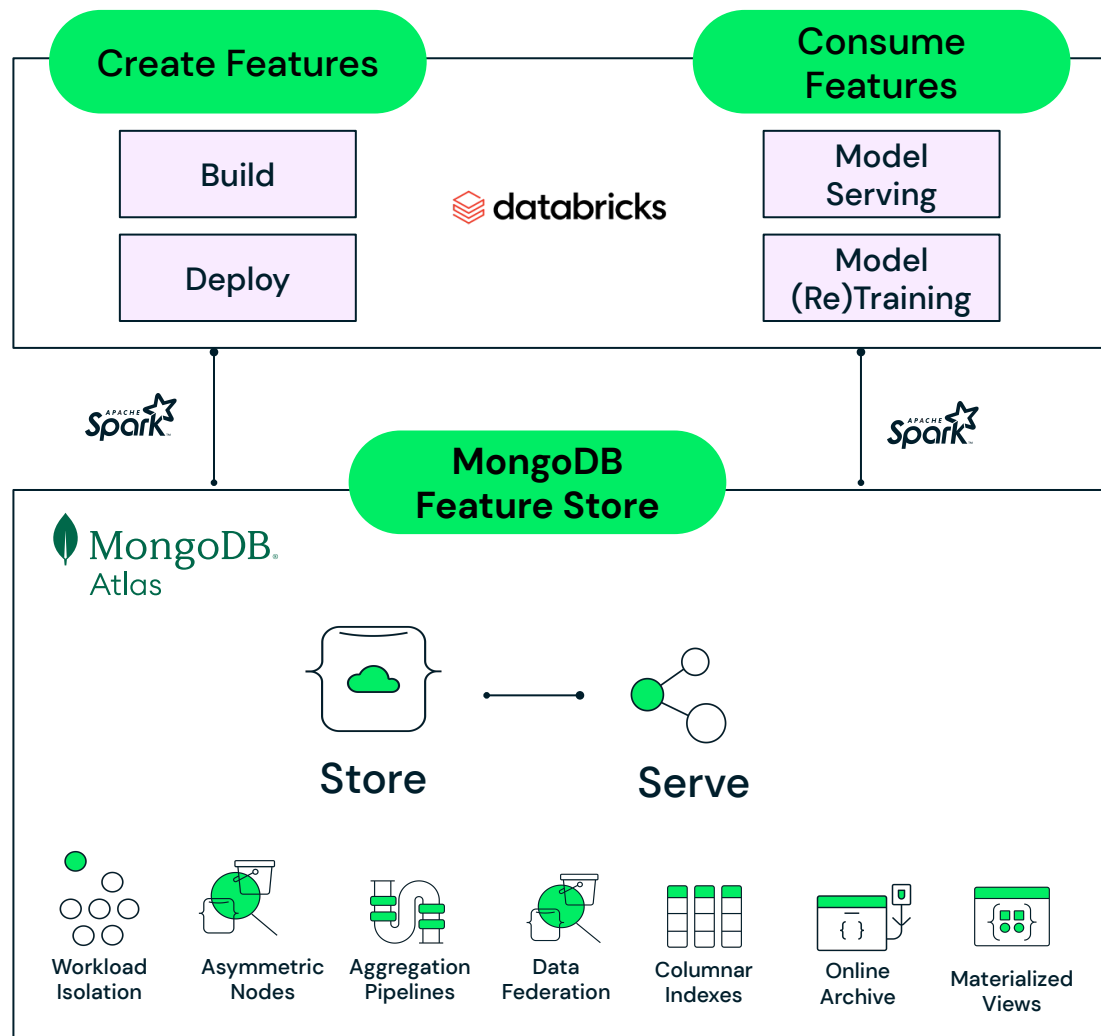
# Retail Solution Architecture



# DEMO

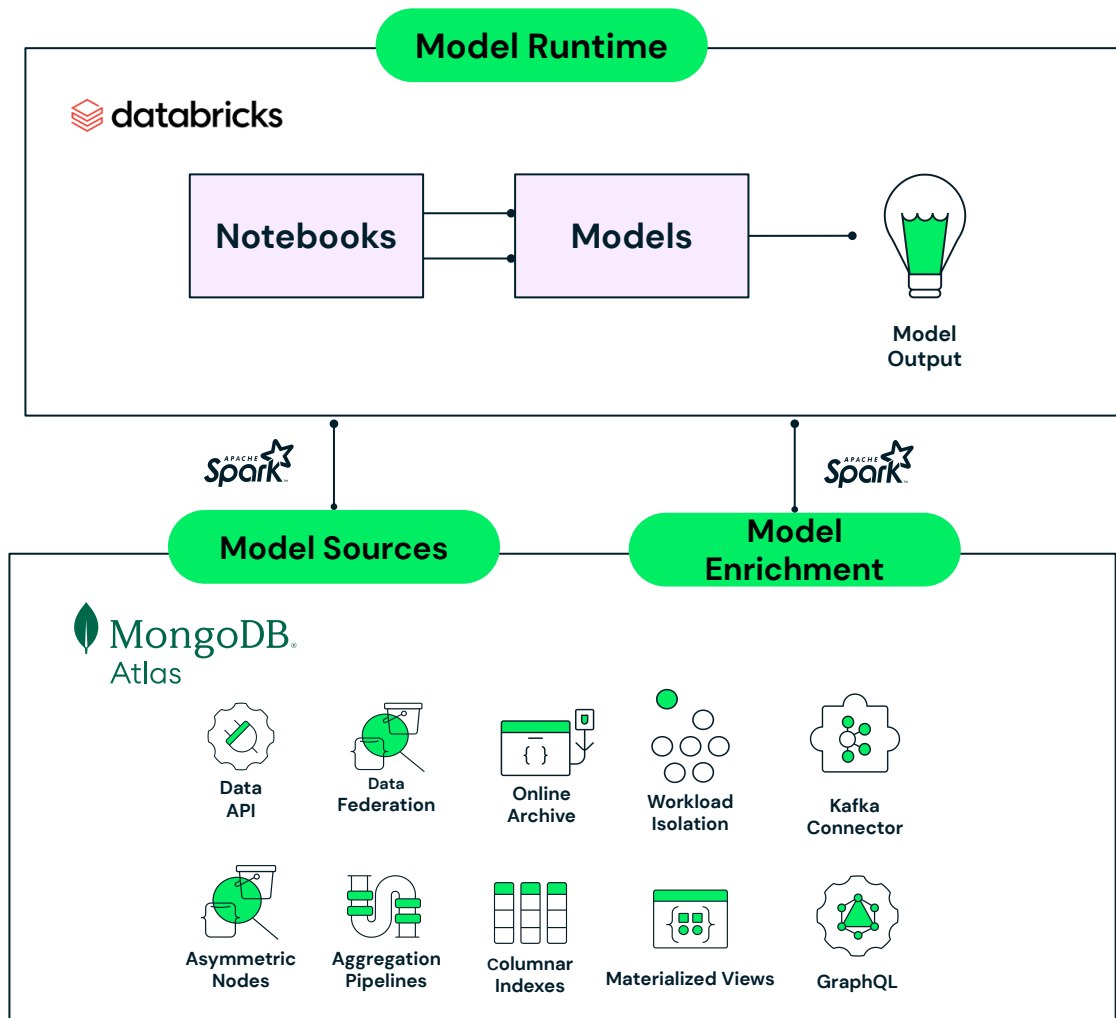


# Reference: MongoDB as a Feature Store

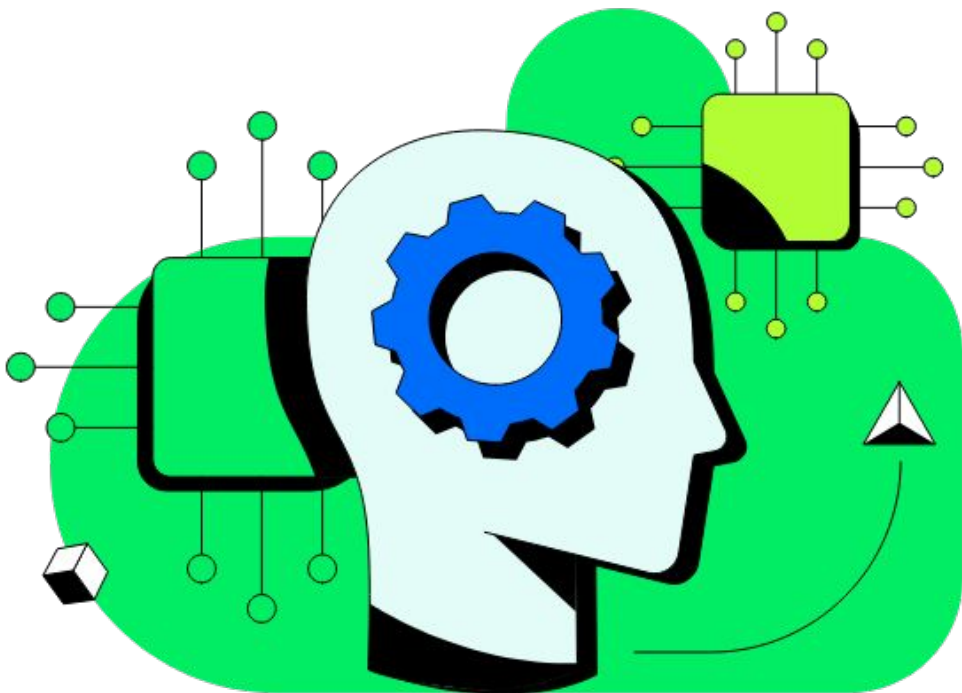


- **Rich & Flexible Documents**  
Bringing agility and speed to data wrangling for feature creation and refinement.
- **Real-time Connectivity**  
Train, re-train, and enrich AI/ML pipelines with the most up-to date data from a variety of sources.
- **Powerful Data Platform**  
Create, store, shape and serve the data exactly how consumers want it, using intuitive, expressive, native data manipulation features.

# Reference: Model Runtime with MongoDB



- **On-Demand & Event Based**  
Trigger your model execution in a variety of ways, leveraging native MongoDB capabilities.
- **Enrich in Real-time**  
Enrich your model payloads with the most current transactional sources.
- **Curate for Consumption**  
Leverage native MongoDB platform features to meet your most demanding data workloads, without additional complexity and components.



Application-driven intelligence is defining the next wave of modern apps

Developers need to work with data and data teams in new ways

## Next Steps

Get all of the code from the demo on [GitHub](#)

Come and visit the MongoDB booth – 38

[Download the whitepaper](#) to learn more about the demands of app-driven intelligence and how MongoDB Atlas helps





# Thank you for your time!

