Couchbase Introduces Capella AI Services to Streamline Development of Agentic AI Applications

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New Capella Offerings Empower Developers to Build Agentic Applications With Confidence by Giving Them Control Over Data, Simplified Workflows and AI Models Available in One Unified Platform

SANTA CLARA, Calif., Dec. 2, 2024 /PRNewswire/ -- Couchbase, Inc. (NASDAQ: BASE), the developer data platform for critical applications in our AI world, today unveiled Capella AI Services to help enterprises address the growing data challenges of AI development and deployment and streamline how they build secure agentic AI applications at scale. The comprehensive AI Services, including model hosting, automated vectorization, unstructured data preprocessing and AI agent catalog services, allow organizations to prototype, build, test and deploy AI agents while keeping models and data close together. This allows organizations to avoid the excess latencies and high operational costs that application developers often experience when introducing new technology components and workflows. Couchbase empowers teams to safely bring agent-based applications into production by giving developers control over data across the development lifecycle and mitigating security and privacy issues from large language models (LLMs) running outside the organization.

"As AI dramatically transforms applications, organizations need secure ways to integrate it and must handle the surge of data across diverse formats to build and deploy agentic applications with confidence," said Matt McDonough, SVP of product and partners at Couchbase. "Couchbase is making this possible by providing a comprehensive AI-powered developer data platform that streamlines retrieval-augmented generation (RAG) pipelines, ensures fast and secure model interactions and enables agent reuse during development and production. We're helping customers through the broad spectrum of AI advances, from simple vector search to RAG chatbots and sophisticated agentic AI apps, and enabling them to deliver more personalized and contextual experiences while reducing development complexity and operational costs."

"The proliferation of AI agents is fundamentally transforming both development and operations, creating new data management challenges for enterprises. Organizations must now preserve and analyze vast amounts of data from agent-LLM interactions, including prompts, responses and validation artifacts – all critical for ensuring ongoing accuracy and reliability. They also face the complexity of maintaining agent guardrails against evolving LLM behaviors," said Carl Olofson, research VP at IDC. "Couchbase Capella and its new AI Services are designed to strategically address these challenges, and provide enterprises the scalable architecture and flexibility needed to handle complex RAG workflows and manage huge volumes of new types of AI data."

Capella AI Services Equip Developers With the Critical Capabilities and Tools Required to Build and Deploy a New Class of Agent-based Applications

Enterprises adopting AI face growing concerns over data security and privacy, performance and latencies, control and costs, and a host of challenges that hinder progress. These include managing different data types and complex data integration workflows, addressing LLM security and accuracy risks, ensuring fast application response times, and adapting to rapidly evolving AI tools and data platforms. Couchbase Capella AI Services address these challenges to help organizations boost developer velocity:

- **Model Services:** Offers managed endpoints for leading LLMs and embedding models, and provides value-added capabilities, such as prompt and conversation caching, guardrails and keyword filtering to support RAG and agentic workflows. With data and AI models within the same organizational boundary, enterprises can more easily meet privacy and latency requirements for enterprise-grade RAG applications, eliminating the need for costly private links or custom solutions.
- **Unstructured Data Services:** Extracts, cleans, chunks and transforms unstructured documents into JSON, preparing them for vectorization. It also extracts structured information from complex documents and makes them queryable in Capella. This saves developers time associated with building DIY preprocessing pipelines.
- **Vectorization Services:** Automates vectorization and indexing of data stored in Capella. Along with Capella Model and Unstructured Data Services, this helps developers quickly build a RAG pipeline with fewer tools.
- **AI Agent Catalog Services:** Accelerates agentic application development by offering a centralized repository for tools, metadata, prompts and audit information for LLM flow, traceability and governance. It also automates discovery of relevant agent tools to answer user questions, and manages guardrails to ensure that agent exchanges are consistent over time.
- **Capella AI Functions:** Enhances developer productivity by enabling AI-driven data analysis directly into application workflows using familiar SQL++ syntax. This accelerates developer productivity by eliminating the need for external tooling, custom coding and managing model deployments. Capella AI Functions include summarization, classification, sentiment

analysis and data masking.

Developers require a unified platform to build and manage the emerging class of agent-based applications and need specialized data management tools to handle complex AI workflows and language model interactions effectively and securely. With Capella AI Services now part of Couchbase's robust developer data platform, customers can streamline RAG pipelines, collect, evaluate and validate agent exchanges, and accelerate time to market for RAG and agentic AI applications.

Couchbase Capella Makes It Simple for Developers to Build

As a leading high-performance enterprise NoSQL data platform for over a decade, Couchbase is empowering developers to build trustworthy, intelligent, mission-critical agentic applications that scale across cloud and edge environments. Couchbase Capella enables developers to accelerate the creation of agent-based AI applications using their existing experience, skills and preferred tools, including SQL++ query language and over a dozen programming languages. Capella streamlines complex AI workflows – from data vectorization and storage to model interactions, validation and analytics. Developers can leverage automated processing, seamlessly integrate with popular AI models and frameworks, and deploy across multiple clouds, all while maintaining complete control over their data security, LLM interactions, agent exchanges, application performance and the user experiences they create. This flexible approach allows teams to build sophisticated AI applications without generating excessive expenses, compromising on their specific requirements or having to learn entirely new tool sets.

"Developer productivity and empowering the development of AI-driven applications anywhere are at the heart of our strategy," continued McDonough. "By providing a unified platform that supports development from prototype to production, we're enabling organizations to build and deploy AI applications from cloud to edge that are sophisticated, trustworthy and cost-effective."

Capella AI Services are available in private preview.

Additional Resources

- Read more about Capella AI Services on the blog.
- Learn about Capella AI Services and sign up for the private preview here.
- Register for our webcast examining the opportunities and challenges of building AI-powered applications and agents here.

About Couchbase
As industries race to embrace AI, traditional database solutions fall short of rising demands for versatility, performance and affordability. Couchbase is seizing the opportunity to lead with Capella, the developer data platform architected for critical applications in our AI world. By uniting transactional, analytical, mobile and AI workloads into a seamless, fully managed solution, Couchbase empowers developers and enterprises to build and scale applications with complete flexibility – delivering exceptional performance, scalability and cost-efficiency from cloud to edge and everything in between. Trusted by over 30% of the Fortune 100, Couchbase enables organizations to unlock innovation, accelerate AI transformation and redefine customer experiences wherever they happen. Discover why Couchbase is the foundation of critical everyday applications by visiting www.couchbase.com and following us on LinkedIn and X.

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