



Couchbase

Couchbase Announces New Features to Accelerate AI-Powered Adaptive Applications for Customers

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Couchbase is the first to announce vector search at the edge, enabling AI applications anywhere

Announcing LangChain and LlamaIndex support for greater developer productivity

Couchbase's multipurpose database platform reduces architectural complexity to build trustworthy adaptive applications more quickly and easily

SANTA CLARA, Calif., Feb. 29, 2024 /PRNewswire/ -- [Couchbase, Inc.](#) (NASDAQ: BASE), the cloud database platform company, today introduced vector search as a new feature in [Couchbase Capella](#)™ Database-as-a-Service (DBaaS) and [Couchbase Server](#) to help businesses bring to market a new class of AI-powered adaptive applications that engage users in a hyper-personalized and contextualized way. Couchbase is the first database platform to announce it will offer vector search optimized for running onsite, across clouds, to mobile and IoT devices at the edge, paving the way for organizations to run adaptive applications anywhere.



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"Adding vector search to our platform is the next step in enabling our customers to build a new wave of adaptive applications, and our ability to bring vector search from cloud to edge is game-changing," said Scott Anderson, SVP of product management and business operations at Couchbase. "Couchbase is seizing this moment, bringing together vector search and real-time data analysis on the same platform. Our approach provides customers a safe, fast and simplified database architecture that's multipurpose, real time and ready for AI."

Vector Search and the Rise of Adaptive Applications

Businesses are racing to build hyper-personalized, high-performing and adaptive applications powered by generative AI that deliver exceptional experiences to their end users. Common use cases include chatbots, recommendation systems and semantic search. For example, suppose a customer wants to purchase shoes that are complementary to a particular outfit. In that case, they can narrow their online search for products by uploading a photo of the outfit to a mobile application, along with the brand name, customer rating, price range and availability at a specific geographical area. This interaction with an adaptive application involves a hybrid search including vectors, text, numerical ranges, operational inventory query and geospatial matching.

As more organizations build intelligence into applications that converse with large language models (LLMs), semantic search capabilities powered by vector search — and augmented by retrieval-augmented generation (RAG) — are critical to taming hallucinations and improving response accuracy. While vector-only databases aim to solve the challenges of processing and storing data for LLMs, having multiple standalone solutions adds complexity to the enterprise IT stack and slows application performance. Couchbase's multipurpose capabilities eliminate that friction and deliver a simplified architecture to improve the accuracy of LLM results. Couchbase also makes it easier and faster for developers to build such applications with a single SQL++ query using the vector index, removing the need to use multiple indexes or products.

Couchbase's recent announcement of its [columnar service](#), together with vector search, provides customers with a unique approach that delivers cost-efficiency and reduced complexity. By consolidating workloads in one cloud database platform, Couchbase makes it easier for development teams to build trustworthy, adaptive applications that run wherever they wish. With vector search as a feature across all Couchbase products, customers gain:

- **Similarity and hybrid search**, combining text, vector, range and geospatial search capabilities in one.
- **RAG** to make AI-powered applications more accurate, safe and timely.
- **Enhanced performance** because all search patterns can be supported within a single index to lower response latency.

Strengthening AI Ecosystem Integrations

In line with its AI strategy, Couchbase is extending its AI partner ecosystem with [LangChain](#) and [LlamaIndex](#) support to further boost developer productivity. Integration with LangChain enables a common API interface to converse with a broad library of LLMs. Similarly, Couchbase's integration with LlamaIndex will provide developers with even more choices for LLMs when building adaptive applications. These ecosystem integrations will accelerate query prompt assembly, improve response validation and facilitate RAG applications.

"Retrieval has become the predominant way to combine data with LLMs," said Harrison Chase, CEO and co-founder of LangChain. "Many LLM-driven applications demand user-specific data beyond the model's training dataset, relying on robust databases to feed in supplementary data and context from different sources. Our integration with Couchbase provides customers another powerful database option for vector store so they can more easily build AI applications."

Supporting Quotes

"We are thrilled to see Couchbase add vector capabilities, and the timing couldn't be better as we're implementing AI and LLMs to better meet the needs of consumers," said Emre Savci, tech lead and staff engineer at Trendyol. "Since working with Couchbase, our developers have become more agile in building and scaling applications to provide the best possible shopping experiences for our customers. The addition of vector search will help our team make the user experience even better and provide more accurate and personalized search results to our shoppers."

"The next generation of apps will be incredibly advanced as organizations put AI in the driver's seat of their innovation," said Doug Henschen, vice president and principal analyst at Constellation Research. "With AI requiring new tools and infrastructure to support it, organizations are increasingly looking at ways to consolidate and simplify technology stacks and manage cost. With the addition of vector search capabilities, Couchbase is reducing complexity and delivering a multipurpose database platform that addresses needs from cloud to edge to on-premises. This will let organizations do more on one, unified platform to accelerate the development of adaptive applications."

These new capabilities are expected to be available in the first quarter of Couchbase's fiscal year 2025 in Capella and Couchbase Server and in beta for mobile and edge.

Additional Resources

- For more information about these and other new features in Couchbase Capella and Server, click [here](#).
- Sign up [here](#) for the beta of Couchbase Mobile with vector search.
- To learn more about Couchbase for vector search, click [here](#).
- Register [here](#) to attend a webcast to learn more about the new features and capabilities for AI-powered adaptive applications.

About Couchbase

Modern customer experiences need a flexible database platform that can power applications spanning from cloud to edge and everything in between. Couchbase's mission is to simplify how developers and architects develop, deploy and run modern applications wherever they are. We have reimagined the database with our fast, flexible and affordable cloud database platform Capella, allowing organizations to quickly build applications that deliver premium experiences to their customers – all with best-in-class price performance. More than 30% of the Fortune 100 trust Couchbase to power their modern applications. For more information, visit www.couchbase.com and follow us on X (formerly Twitter) @couchbase.

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