

The data-driven customer experience

Moving insurers from detect and repair to predict and prevent

In partnership with



An industry at a critical crossroads

In an era where combined ratios are soaring to 103% and technological advancements are reshaping business landscapes at an unprecedented pace, the insurance industry stands at a critical crossroads.¹ Mounting year-over-year losses highlight the pressing need for more sophisticated risk analysis and the refinement of new products tailored to emerging risks and market demands. Concurrently, the lack of distinct differentiation among carriers' offerings has led to a decline in brand loyalty. Amidst these trends, Generative AI (GenAI) is set to transform customer centricity in insurance. By harnessing GenAI, insurers can deliver personalized experiences, anticipate customer needs, and offer tailored solutions with unmatched precision.

Modern consumers demand not only immediate responses, but also proactive engagement and solutions customized to their unique circumstances and life stages. A recent study of the largest insurance carriers in North America revealed compelling evidence of the benefits of prioritizing customer experience. The study showed that leaders in customer experience reported significantly stronger growth in revenue and earnings compared to their peers. Additionally, these leaders enjoyed lower expense ratios and higher employee satisfaction scores.²

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To meet the growing demand for customer experience transformation, Capgemini and MongoDB have developed an innovative GenAI-powered digital assistant designed to change the way insurance companies interact with their customers. At the core of this solution is MongoDB Atlas, featuring a flexible data model and Atlas Vector Search. This fully integrated developer data platform enables users to achieve more with fewer, richer data objects. With Atlas, organizations can advance their innovation agendas while simultaneously consolidating their technology portfolios, thereby realizing the benefits of a converged AI and application datastore. Our solution represents a quantum leap in insurance technology, offering a future where insurers can predict and prevent rather than merely detect and repair.



A comprehensive GenAI digital assistant for insurers

Our GenAI digital assistant solution leverages advanced machine learning algorithms and a robust vector processing framework to provide insurers with a comprehensive 360-degree view of their customers. It offers longitudinal summaries across the entire value cycle, including enrollment, policy administration, claims processing, policy servicing, underwriting, and more. By integrating both structured and often underutilized unstructured data, our solution delivers deep insights into customer behaviors, preferences, and risk profiles. This enables insurers to deliver personalized experiences and optimize their service offerings effectively.

Key solution features

1

Enhanced customer insights

Our solution utilizes vectorized data and natural language processing to generate detailed customer profiles, including financial summaries, policy details, interaction histories, and health assessments. This granular insight allows for tailored customer engagement and improved service delivery.

2

Operational efficiency

Through its lightweight ingest layer and scalable architecture, the solution streamlines data processing and reduces turnaround times for customer inquiries and claims processing, significantly boosting operational efficiency.

3

Risk management and personalization

By analyzing comprehensive data sets, our solution enhances risk assessment capabilities and supports insurers in offering customized insurance products that cater to individual risk profiles and preferences.

4

Multilingual support and accessibility

The solution's multilingual capabilities ensure that insurers can interact with and serve a diverse customer base, breaking language barriers and enhancing accessibility.

5

Digital transformation

Our solution is not just a tool but a partner in digital transformation, helping insurers overhaul their legacy systems and embrace a digital-first approach that aligns with modern consumer expectations.



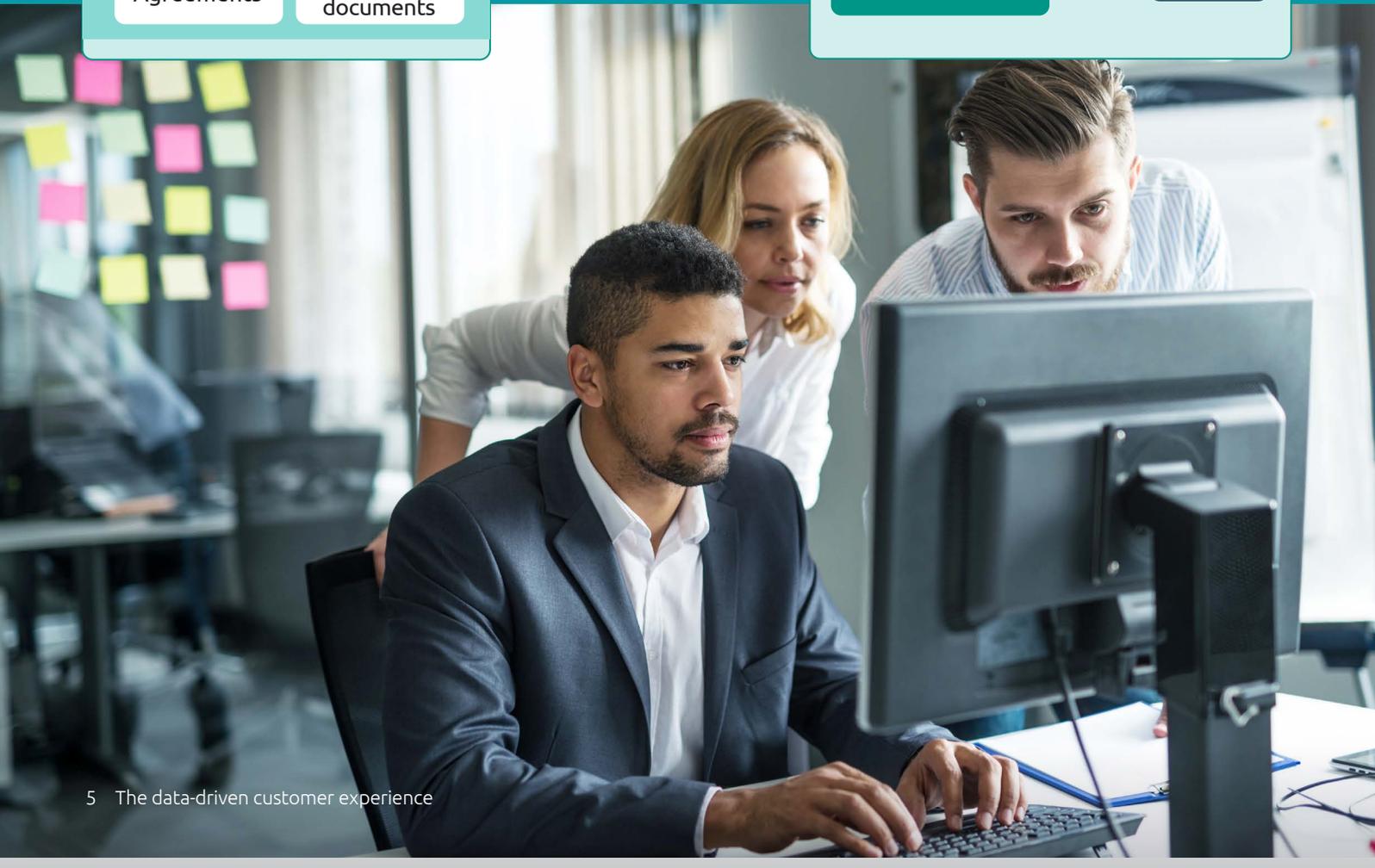
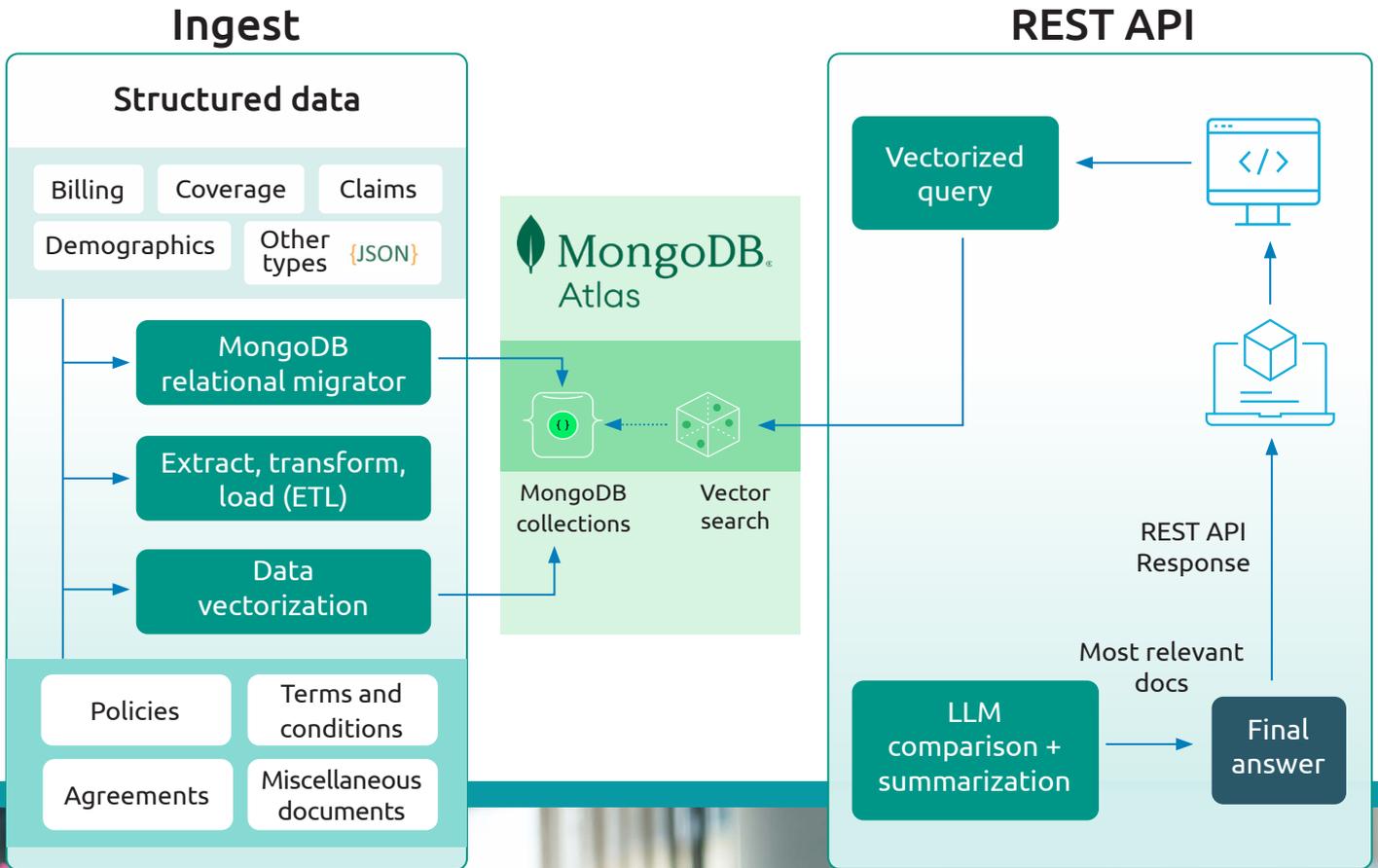


The power of our solution is best illustrated through key personas that require a deep understanding of customer journeys, a task that traditionally takes months to accomplish through data aggregation across multiple systems. For example, call center representatives often lack a complete view of a customer's interactions across various lines of business. Our solution integrates and analyzes data from multiple sources in real time, providing a comprehensive customer profile. This enables representatives to offer more informed and effective support, thereby enhancing customer satisfaction, optimizing operational efficiency, and reducing response times.

In the case of underwriting complex policies, such as commercial insurance, our solution excels by aggregating and analyzing extensive data from multiple sources, including third-party reports in PDF format. By leveraging advanced prompt engineering, natural language processing (NLP), vectorization, and chunking strategies, our solution efficiently processes and interprets large volumes of information. This capability enables underwriters to swiftly assess risk factors, evaluate claims histories, and make informed decisions. This streamlined approach enhances the accuracy and speed of the underwriting process, facilitates proactive risk management strategies, and ultimately fosters a more robust and adaptive insurance industry.

High-level architecture

Our GenAI digital assistant solution integrates advanced technologies to enhance data management and summarization capabilities, making it a powerful tool for insurance companies aiming to leverage big data and AI for enhanced decision-making and customer service.



Key components and processes

- 1 Data ingestion**

This stage involves the ingestion of various types of data, including structured, semi-structured (e.g., tables, collections, flat files, DB schema, JSONs), and unstructured data (e.g., business requirements, policies, terms and conditions). The data is extracted, transformed, and loaded into MongoDB, after which it undergoes vectorization to convert the content into embeddings suitable for more advanced querying and analysis.
- 2 MongoDB Atlas integration**

The data is stored in MongoDB Atlas, a fully-managed cloud database. This includes both the primary data in MongoDB collections and the vectorized data used for advanced searches. MongoDB Atlas can be connected to various cloud platforms and native services, operating effectively across multiple environments and clouds.
- 3 Vector search and LLM summarization**

When a user provides a prompt, it's combined with context from MongoDB, initiating a query process. Depending on the nature of the query, the system either retrieves data directly from MongoDB collections or uses a vectorized query to pull from the embeddings in MongoDB vector store. After the relevant data is retrieved, large language models (LLM) are used to compare and summarize the information, translating complex data into a human-understandable format.
- 4 REST API**

The system interfaces with external applications where the summarized data can be queried and retrieved through REST API calls. The REST API ensures that responses are structured and can be easily integrated into user-facing applications or used for further processing.
- 5 Output**

The final output is a concise, comprehensible summary derived from complex data sets, tailored to the specific query made by the user.

Why MongoDB for this solution: Capable of storing context data and vector data, as well as operational or transactional data in the future, our solution offers a unified data store. With a single query language to handle various workloads, such as context and vector data, MongoDB stands out as the optimal choice.

Case Study

Enhancing underwriting efficiency for a global Commercial and P&C insurer

A global leader in the insurance industry sought an innovative solution to streamline underwriting processes and enhance decision-making efficiency. Underwriters faced significant challenges in assessing an insured's market position due to the time-consuming process of extracting and analyzing information from a multitude of internal and external sources. Additionally, the existing manual processes for accessing and interpreting underwriting guidelines and reports were inefficient and prone to errors, leading to delays in decision-making and increased operational costs.

Our solution

To address these challenges, the insurer implemented our solution to extract crucial information from both internal and external documents, facilitating a comprehensive assessment of an insured's market position. The implementation included:

Digitization of underwriting guidelines

By converting traditional underwriting guidelines into a digital format, underwriters were able to access and retrieve necessary information more efficiently.

AI-enhanced document analysis

Our solution automates the analysis of uploaded documents through natural language processing and AI models, significantly reducing the time underwriters spend on manual data extraction and analysis.

AI deployment

Integration with REST API facilitates seamless data exchange between the user interface and AI models, further streamlining the process.

Impact delivered

Increased productivity

Underwriters experienced a **15%** increase in productivity due to more efficient data handling and analysis processes.

Faster report integration

The time required to add new vendor underwriting reports was reduced by **25%**, enabling quicker updates and decision-making.

Reduced manual effort

There was a **10%** efficiency gain as the solution decreased the need for manual searches through PDF documents.



Case Study

Transforming healthcare management with advanced data analytics

A prominent healthcare Payer in North America sought innovative solutions to enhance healthcare management and member engagement. They were facing challenges in effectively managing and segmenting their vast member base to provide personalized and timely healthcare services. The existing processes were not fully optimized for leveraging the extensive data collected, leading to gaps in provisioning care and member engagement.

Our solution

Our solution was implemented to harness the power of the client's healthcare data. The solution focused on the following strategic areas:

Healthcare time series summarization

The solution summarized the longitudinal time series of member data, enabling the client to have a dynamic and comprehensive view of each member's health journey.

Proactive outreach and personalized care

Leveraging a whole health understanding derived from the summarized data, our solution facilitated proactive outreach initiatives, ensuring members received personalized care tailored to their specific clinical contexts.

Enhanced member portal experience

The solution also involved fine-tuning the patient portal to improve user experience, making it easier for members to manage their health and interact with healthcare services.

Impact delivered

Tailored health plan

There was a **10%** improvement in the tailoring of health plans and coverages, enhancing personalization and member satisfaction.

Member segmentation

The segmentation of members improved by **5%**, enabling more targeted and effective health interventions.

Wellness program design

Efficiency in designing wellness programs increased by **15%**, leading to more engaging and impactful health initiatives.



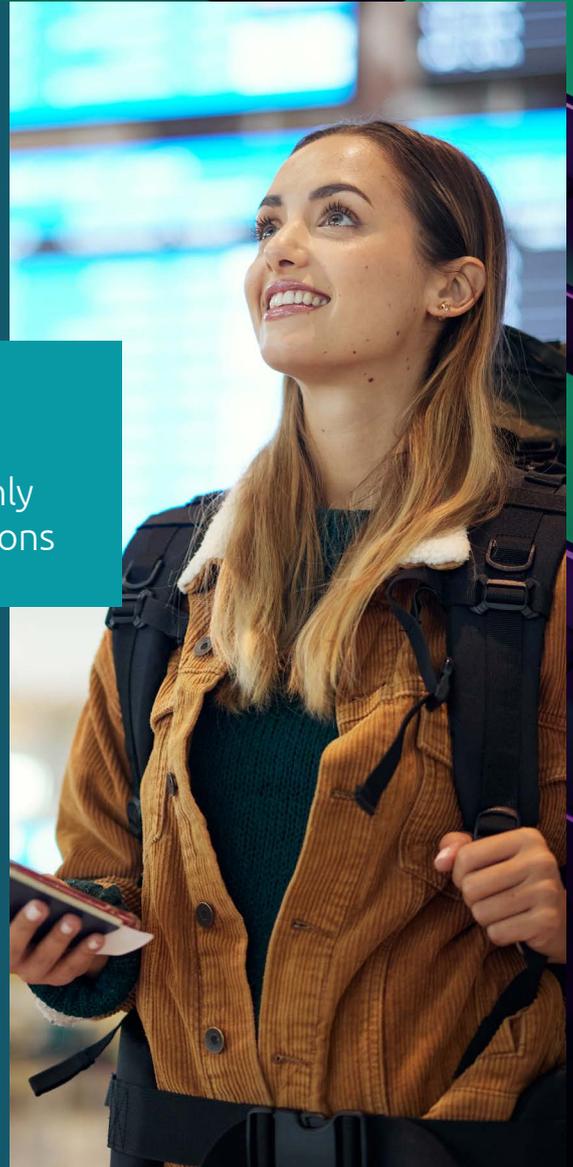
A new era of customer experience innovation awaits

Our GenAI digital assistant solution represents a strategic investment for insurers aiming to place customers at the heart of their operations. With its advanced AI capabilities and comprehensive data integration, it empowers insurers to not only meet but exceed customer expectations, thereby driving growth and profitability in a competitive landscape.

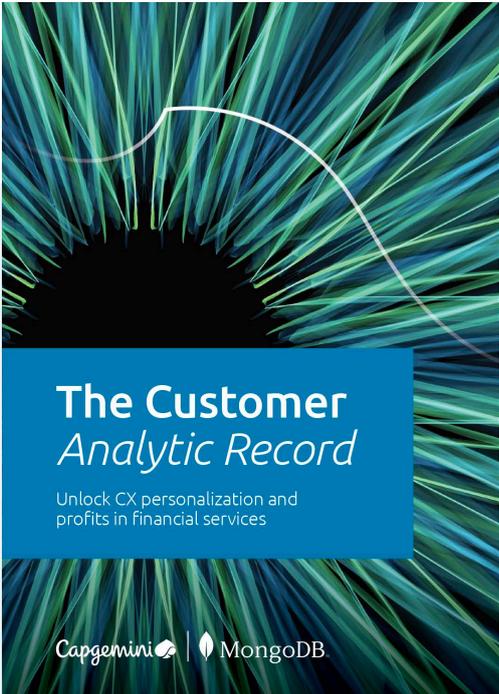
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By embracing this solution, you're positioned at the forefront of the insurance industry, capable of adapting to changes and capitalizing on opportunities faster than ever before. Our team is ready to assist you in implementing it in your organization, ensuring a seamless transition and ongoing support that maximizes your investment.

Don't miss this opportunity to redefine what your business can achieve. Contact us to take the first step towards transforming your organization. Together, we can unlock new possibilities and create a future where your business leads with innovation and excellence.



Additional reading from Capgemini and MongoDB



The customer analytic record

Unlock CX personalization and profits in financial services

Your customers enjoy a consumer-grade experience with numerous brands they interact with—why should this be any different for banks and insurers? The Customer Analytic Record (CAR) serves as a centralized repository that aggregates various customer data across multiple touchpoints, which aids in understanding customer behavior and preferences, and supports data-driven decision-making.

[Read more](#)

Guarding the gateway

Combatting real-time fraud in card-not-present transactions

Global card losses due to fraud are projected to total an astounding \$397 billion during the next ten years. Most current fraud detection approaches rely on outdated transaction processing methods. By expanding data entities and leveraging AI and ML algorithms, financial institutions can significantly enhance the accuracy and speed of their CNP fraud detection methods.

[Read more](#)



Endnotes

- <https://www.capgemini.com/insights/research-library/world-property-and-casualty-insurance-report/>
- <https://www.mckinsey.com/industries/financial-services/our-insights/insurance/elevating-customer-experience-a-win-win-for-insurers-and-customers>

Contacts

Capgemini



Ajish Gopan

VP, Insurance Head
Financial Services Insights & Data
ajish.gopan@capgemini.com



Ashvin Parmar

VP, Head of FS Gen AI COE
Portfolio Head
Financial Services Insights & Data
ashvin.parmar@capgemini.com



Shyamsree Nandi

Vice President
Financial Services Insights & Data
shyamsree.nandi@capgemini.com

MongoDB



Jeff Needham

Principal, Industry Solutions
Insurance
jeff.needham@mongodb.com



Murugasubramanian Balakrishnan

Advisory Solution Architect
SI Partners
muruga.subramanian@mongodb.com



Ashwin Gangadhar

Senior Solutions Architect
AI/ML | NLP | GenAI
ashwin.gangadhar@mongodb.com

Regional contacts

North America

Ajish Gopan

VP, Insurance Head
Financial Services Insights & Data
ajish.gopan@capgemini.com

United Kingdom

Aman Khan

UK Insurance Leader
Financial Services Insights & Data
aman.a.khan@capgemini.com

Europe

Erwin Vorwerk

Vice President
Financial Services Insights & Data
erwin.vorwerk@capgemini.com

India

Narendra Sengupta

Vice President
Financial Services Insights & Data
narendra.sengupta@capgemini.com

Asia/Pacific

Kirti Jain

Vice President
Financial Services Insights & Data
kirti.a.jain@capgemini.com



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About Capgemini

Capgemini is a global business and technology transformation partner, helping organizations to accelerate their dual transition to a digital and sustainable world, while creating tangible impact for enterprises and society. It is a responsible and diverse group of 340,000 team members in more than 50 countries. With its strong over 55-year heritage, Capgemini is trusted by its clients to unlock the value of technology to address the entire breadth of their business needs. It delivers end-to-end services and solutions leveraging strengths from strategy and design to engineering, all fueled by its market leading capabilities in AI, cloud and data, combined with its deep industry expertise and partner ecosystem. The Group reported 2023 global revenues of €22.5 billion.

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About MongoDB

MongoDB's developer data platform offers significant architectural advantages by enabling organizations to securely unify application data (both structured and unstructured) with AI-related data (vectors). This capability allows institutions to build rich, real-time AI applications. At the core of MongoDB's developer data platform is MongoDB Atlas, the most advanced multi-cloud database on the market. Atlas provides unmatched data distribution and cloud mobility, built-in automation for resource and workload optimization, and a flexible document model, among other features. MongoDB also offers the flexibility to deploy applications on-premises, on a single public cloud, or across multiple clouds simultaneously, ensuring resilience, scalability, and the highest levels of data privacy and security.

For more information, please visit www.mongodb.com

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