

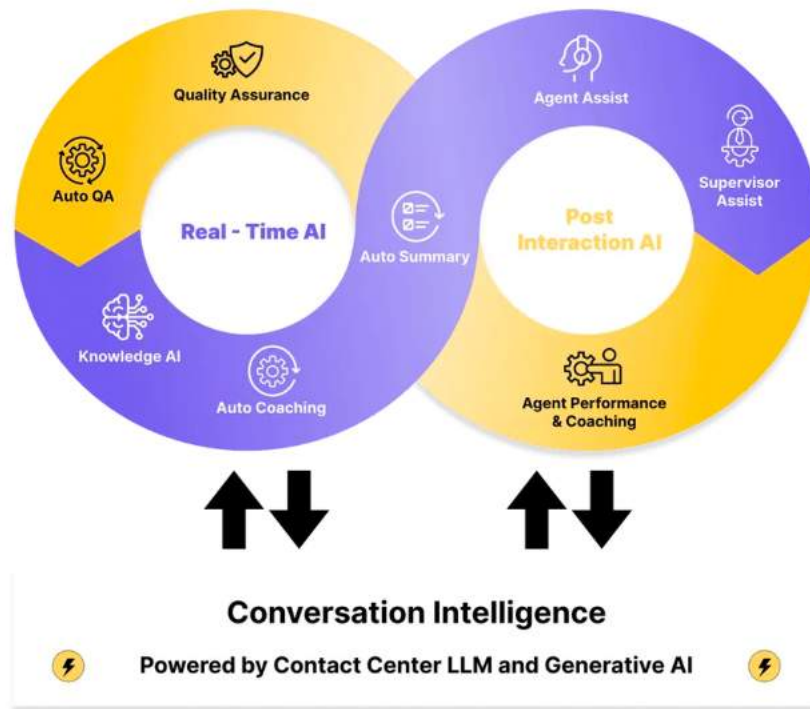


What's really happening in your business? The answer to that question lies in the millions of interactions between your customers and your brand. If you could listen in on every one of them, you'd know exactly what was up--and down. You'd also be able to continuously improve customer service by coaching agents when needed. However, the reality is that most companies have visibility in only 2% of their customer interactions. [Observe.AI](#) is here to change that. The company is focused on being the fastest way to boost contact center performance with live conversation intelligence.

Check out our [AI resource page](#) to learn more about building AI-powered apps with MongoDB.

Founded in 2017 and headquartered in California, Observe.AI has raised over \$200m in funding. Its team of 250+ members serves more than 300 organizations across various industries. Leading companies like Accolade, Pearson, Public Storage, and 2U partner with Observe.AI to accelerate outcomes from the frontline to the rest of the business.

The company has pioneered a 40 billion-parameter contact center large language model (LLM) and one of the industry's most accurate Generative AI engines. Through these innovations, Observe.AI provides analysis and coaching to maximize the performance of its customers' front-line support and sales teams.



We sat down with Jithendra Vepa, Ph.D, Chief Scientist & India General Manager at Observe.AI to learn more about the AI stack powering the industry-first contact center LLM.

Can you start by describing the AI/ML techniques, algorithms, or models you are using?

"Our products employ a versatile range of AI and ML techniques, covering various domains. Within natural language processing (NLP), we rely on advanced algorithms and models such as transformers, including the likes of transformer-based in-house LLMs, for text classification, intent and entity recognition tasks, summarization, question-answering, and more. We embrace supervised, semi-supervised, and self-supervised learning approaches to enhance our models' accuracy and adaptability."

"Additionally, our application extends its reach into speech processing, where we leverage state-of-the-art methods for tasks like automatic speech recognition and sentiment analysis. To ensure our language capabilities remain at the forefront, we integrate the latest Large Language Models (LLMs), ensuring that our application

benefits from cutting-edge natural language understanding and generation capabilities. Our models are trained using contact center data to make them domain-specific and more accurate than generic models out there.”

Can you share more on how you train and tune your models?

“In the realm of model development and training, we leverage prominent frameworks like TensorFlow and PyTorch. These frameworks empower us to craft, fine-tune, and train intricate models, enabling us to continually improve their accuracy and efficiency.”

“In our natural language processing (NLP) tasks, prompt engineering and meticulous fine-tuning hold pivotal roles. We utilize advanced techniques like transfer learning and gradient-based optimization to craft specialized NLP models tailored to the nuances of our tasks.”

How do you operationalize and monitor these models?

“To streamline our machine learning operations (MLOps) and ensure seamless scalability, we have incorporated essential tools such as Docker and Kubernetes. These facilitate efficient containerization and orchestration, enabling us to deploy, manage, and scale our models with ease, regardless of the complexity of our workloads.”

“To maintain a vigilant eye on the performance of our models in real-time, we have implemented robust monitoring and logging to continuously collect and analyze data on model performance, enabling us to detect anomalies, address issues promptly, and make data-driven decisions to enhance our application's overall efficiency and reliability.”

The role of MongoDB in Observe.AI technology stack

The [MongoDB developer data platform](#) gives the company's developers and data scientists a unified solution to build smarter AI applications. Describing how they use MongoDB, Jithendra says

“OBSERVE.AI processes and runs models on millions of support touchpoints daily to generate insights for our customers. Most of this rich, unstructured data is stored in MongoDB. We chose to build on MongoDB because it enables us to quickly innovate, scale to handle large and unpredictable workloads, and meet the security requirements of our largest enterprise customers.”

Getting started

Thanks so much to Jithendra for sharing details on the technology stack powering Observe.AI's conversation intelligence and MongoDB's role.

To learn more about how MongoDB can help you build AI-enriched applications, take a look at the [MongoDB for Artificial Intelligence](#) page. Here, you will find tutorials, documentation, and whitepapers that will accelerate your journey to intelligent apps.