Startup Uses Speech AI to Coach Contact-Center Agents Into Boosting Customer Satisfaction

Minerva CQ's real-time, automatic speech recognition platform uses NVIDIA Riva to help English, Italian and Spanish-speaking customers and agents.

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Minerva CQ, a startup based in the San Francisco Bay Area, is making customer service calls quicker and more efficient for both agents and customers, with a focus on those in the energy sector .

The NVIDIA Inception member's name is a mashup of the Roman goddess of wisdom and knowledge — and collaborative intelligence (CQ), or the combination of human and artificial intelligence.

The Minerva CQ platform coaches contact-center agents to drive customer conversations — whether in voice or web-based chat — toward the most effective resolutions by offering real-time dialogue suggestions, sentiment analysis and optimal journey flows based on the customer's intent. It also surfaces relevant context, articles, forms and more.

Powered by the NVIDIA Riva software development kit, Minerva CQ has best-in-class automatic speech recognition (ASR) capabilities in English, Spanish and Italian.

"Many contact-center solutions focus on automation through a chatbot, but our solution lets the AI augment humans to do a better job, because when humans and machines work together, they can accomplish more than what the human or machine alone could," said Cosimo Spera, founder and CEO of Minerva CQ.

The platform first transcribes a conversation into text in real time. That text is then fed into Minerva CQ's AI models that analyze customer sentiment, intent, propensity and more.

Minerva CQ then offers agents the best path to help their customers, along with other optional resolution paths.

The speech AI platform can understand voice- and text-based conversations within both the context of a specific exchange and the customer's broader relationship with the business, according to Jack Garrett, vision architect at Minerva CQ.

Watch a demo of Minerva CQ at work:

Minerva CQ last month announced that it built what it says is the first and most accurate Italian ASR model for enterprises, adding to the platform's existing English and Spanish capabilities. The Italian ASR model has a word error rate of under 7% and is expected to be deployed early next year at a global energy company and telecoms provider.

"When we were looking for the best combination of accuracy, speed and cost to help us build the ASR model, NVIDIA Riva was at the top of our list," Spera said.

Riva enables Minerva CQ to offer real-time responses. This means the AI platform can stream, process and transcribe conversations — all in less than 300 milliseconds, or in a blink of an eye.

"Riva is also fully customizable to solve our customers' unique problems and comes with industry-leading out-of-the-box accuracy," said Daniel Hong, chief marketing officer at Minerva CQ. "We were able to quickly and efficiently fine-tune the pretrained language models with help from experts on the NVIDIA Riva team."

Access to technical experts is one benefit of being part of NVIDIA Inception, a free, global program that nurtures cutting-edge startups. Spera listed AWS credits, support on experimental projects, and collaboration on go-to-market strategy among the ways Inception has bolstered Minerva CQ.

In addition to Riva, Minerva CQ uses the NVIDIA NeMo framework to build and train its conversational AI models, as well as the NVIDIA Triton Inference Server to deliver fast, scalable AI model deployment.

Complementing its focus on the customer, Minerva CQ is also dedicated to agent wellness and building capabilities to track agent satisfaction and experience. The platform enables employees to be experts at their jobs from day one — which greatly reduces stress on agents, instills confidence, and lowers attrition rates and operational costs.

Plus, Minerva CQ automatically provides summary reports of conversations, giving agents and supervisors helpful feedback, and analytics teams powerful business insights.

"All in all, Minerva CQ empowers agents with knowledge and allows them to be confident in the information they share with customers," Hong said. "Easy customer inquiries can be tackled by automated self-service or AI chatbots, so when the agents are hit with complex questions, Minerva can help."

Minerva CQ's initial deployments are focused on retail energy and electrification.

For retail energy providers, the platform offers agents simple, consistent explanations of energy sources, tariff plans, billing changes and optimal spending choices.

It also assists agents to resolve complex problems for electric vehicle customers, and helps EV technicians troubleshoot infrastructure and logistics issues.

"Retail energy and electrification are inherently intertwined in the movement toward decarbonization, but they can still be relatively siloed in the market space," Garrett said. "Minerva helps bring them together."

Minerva CQ is deployed by a leading electric mobility company as well as one of the largest utilities in the world, according to Spera.

These clients' contact centers across the U.S. and Mexico have seen a 40% decrease in average handle time for a customer service call thanks to Minerva CQ, Spera said. Deployment is planned to expand further into the Spanish-speaking market — as well as in countries where Italian is spoken.

"We all want to save the planet, but it's important that change come from the bottom up by empowering end users to make steps toward decarbonization," Spera said. "Our focus is on providing customers with information so they can best transition to clean-energy-source subscriptions."

He added, "In the coming years, we'd like to see the brand Minerva CQ become synonymous with electrification and decarbonization."

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