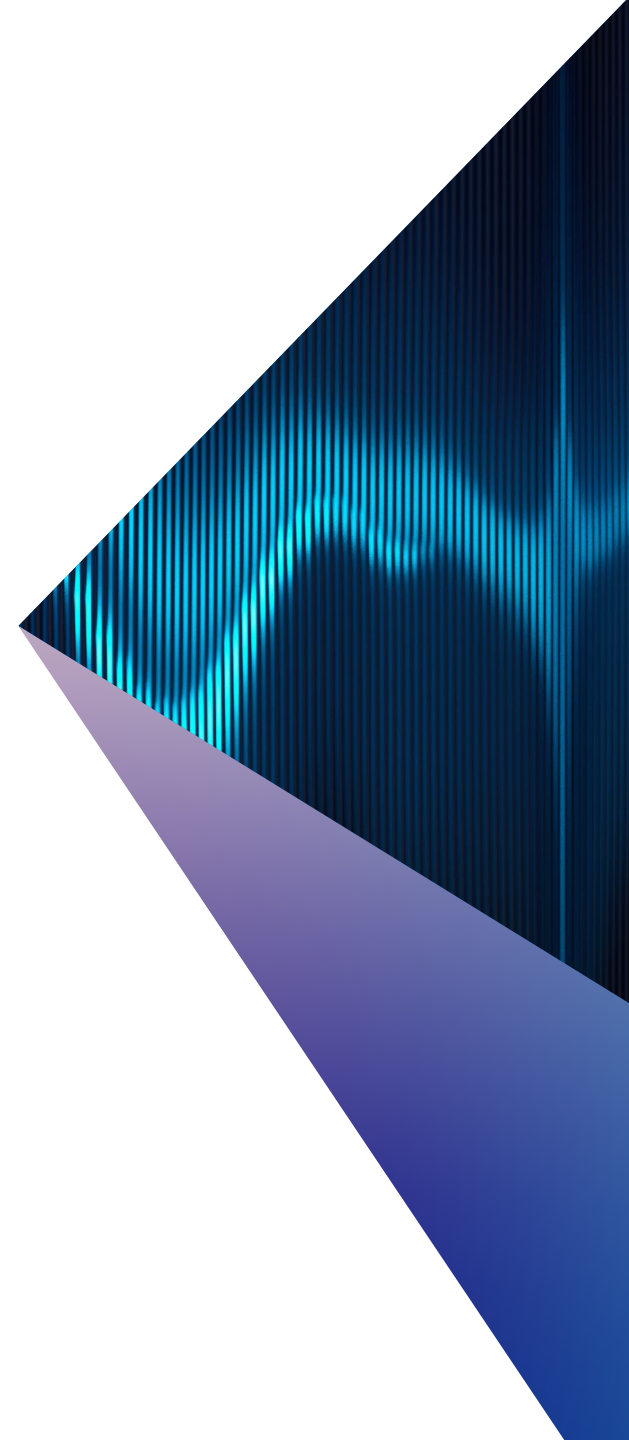cognizant | Google Cloud

How gen AI is reimagining and remaking the modern contact center

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Bringing generative AI capabilities to the modern contact center will revolutionize how businesses do customer service, and it cannot be ignored

Large language models (LLMs) and generative artificial intelligence (gen AI) are increasingly used in contact centers to enhance customer service, streamline operations and increase efficiency. These advanced generative AI technologies enable natural language understanding, generation and context-aware interactions, leading to more effective communication with customers.

The integration of generative AI into the traditional contact center already improves customer experiences for organizations and helps them trim operating costs with features such as:

- Generative AI-powered chatbots and virtual assistants that can respond to customer queries

- Real-time agent assistance during live customer interactions to support human agents with real-time suggestions and guidance, reducing their cognitive load and enhancing their performance

- Predictive analytics that help contact centers predict customer behavior, anticipate issues and proactively address potential problems before they escalate

One solution where this technology is actively used is Google Cloud Contact Center AI (CCAI). Read the CCAI white paper. CCAI utilizes the generative AI-driven capabilities provided by LLMs and machine learning (ML) so contact centers can streamline customer interactions and automate processes while providing a higher level of service to their customers. With CCAI, organizations can quickly build, deploy and scale their own gen AI-powered contact centers.

Natural language experiences start with LLMs

Large language models (LLMs) are a type of generative AI model that uses deep learning algorithms to recognize, generate, translate and/or summarize vast quantities of written human language and textual data. These models are essential to achieving the desired natural and seamless interactions, both written and verbal, that ultimately define the success of a contact center.

LLMs are important because they can produce highly accurate results when it comes to understanding natural language. These models are used for sentiment analysis, question answering, summarization, machine translation and more.

Popular LLMs

The most popular and widely used LLMs are Google PaLM 2, OpenAI GPT-3 and Microsoft MT-DNN. These LLMs are trained on massive amounts of data from the web, including books, news articles, social media posts, summarization, machine translation and more.

The role of generative AI

Generative AI offers natural language processing for customer-facing applications using advanced algorithms to interpret and understand human language. Backed by extensive LLMs, generative AI helps organizations gain valuable insights into customer conversations and feedback to better personalize their services.

Generative AI provides automated solutions for customer service that allow businesses to deliver more personalized experiences faster and with greater accuracy. Enabled by LLMs, generative AI is being used to quickly generate new bots from voice commands or text inputs. These bots are capable of listening to conversations between human agents and customers and learning in real time.

This reduces operational costs associated with manually programming bots offline and reduces the workload of human agents while improving the quality of customer interactions.

How LLMs enable chatbots

LLMs have the potential to drastically improve customer experiences by enabling automated chatbots with powerful language capabilities. Businesses could use these models to create and train chatbots that can engage in conversation with customers without the need for manual input or programming code, resulting in improved customer satisfaction with faster response times and more personalized services. LLMs can also enable deeper levels of personalization by allowing customers to easily search product catalogs or access personalized recommendations for products and services based on their individual needs and preferences.

Building better bots with generative AI

Generative AI can be used to develop more powerful and efficient chatbots to provide customers with more personalized services, and now it can be done easier than ever before through voice prompts or text inputs. Modern generative AI-based bots are bringing about entirely new ways businesses can create, implement and enhance the performance of their bots so they can maximize the benefits of generative AI while reducing operational costs.

Voice-generated transactional bots

Creating a bot with generative AI can be as easy as giving it a voice prompt. For example, "I'm a telco operator. Build me a bot that will help my customers with their inquiries." Generative AI has the capabilities to build that bot for you. From there, it can be fine-tuned for particular types of inquiries. This method represents a major milestone from the traditional approach of handcrafting bots and going through extensive offline testing, training and monitoring.

Training bots on a knowledge base

When you provide a knowledge base to the CCAI Gen App Builder, the generative AI capabilities understand everything present in the knowledge base and automatically create an "infobot" capable of responding to any queries based on what it learned. These bots can be created with a text prompt, or they can leverage generative AI's capabilities to learn directly from the knowledge base.

Self-learning bots

Generative AI-enabled bots are capable of real-time learning. For example, suppose a customer interacts with a bot and asks a question that the bot cannot answer. The conversation would be escalated to a human agent, but the bot remains aware of the conversation and learns how to respond to that question. The next time the bot receives that question, it will have the knowledge to answer it. It's essentially a feedback loop that keeps the bot engaged and learning.

Training agents with gen AI

Generative AI can be used to gain deeper understanding of customer preferences, which can then be applied to training materials for human agents. This would help improve their skills and bolster their confidence when dealing with customers. Some of the ways generative AI can be used in agent training include:

- Providing agents with instant access to emails and replies in response to a particular query they receive so they have the information at their fingertips
- Providing businesses with advanced analytics capabilities to monitor agent performance and identify areas for improvement in real time
- Using ML algorithms to discover correlations between customer interactions and outcomes to refine agent training
- Leveraging its generative AI-powered virtual agents so companies gain insights into customer behavior, leading to improved service quality while reducing costs
- Using generative AI-powered virtual agents to simulate real conversations with customers and provide feedback on how human agents are interacting with them

Training bots for customer 360 functions

By leveraging generative AI-enabled bots and analytics tools, companies can monitor performance in real time, providing insights into what works best for each customer segment and enabling businesses to make timely adjustments accordingly. By understanding customer conversations and feedback, these bots can accurately identify customer needs and preferences at any moment, which can then be used to recommend additional products or services that may be relevant to them.

These recommendations can also be personalized based on factors such as past purchases, browsing behavior and demographic data. Generative AI-powered algorithms are capable of analyzing this data to identify potential opportunities for cross-selling or upselling, allowing companies to capitalize on existing customer relationships while creating new ones.

By using generative AI chatbots to perform cross-selling and upselling in a contact center, customers can have their individual needs met, leading to higher levels of satisfaction and increased sales. This approach would also help reduce the workload on human agents while ensuring customers receive quality service with minimal wait times.

Bringing generative AI into the contact center

Generative AI allows companies to quickly build, deploy and scale AI-powered customer services. By combining generative AI with Google Cloud Contact Center and CCAI Platform, companies can maximize the benefits of AI while reducing costs associated with managing their digital presence. This makes it easier for them to stay competitive in today's digital marketplace without incurring high costs.

Business use case

About the customer

A major retailer transformed its contact center with Google Cloud CCAI Platform and Cognizant.

Challenge

An outdated on-premises contact center system limited this retail enterprise's ability to scale operations and expand its presence to other digital channels. Customers were unsatisfied with the high average wait times.

Solution

Cognizant modernized the legacy contact center into the latest cloud platform powered by Google Cloud CCAI Platform and redefined interactive voice response (IVR) call flows into a voice user experience, with self-service options for orders and payments.

By implementing Google Cloud CCAI Platform and natural language understanding (NLU) capabilities for voice and chat, the company increased self-service by approximately 40% and cut average hold times by 20%. The cloud-based solution enabled the company to move from a capital expense to an operating expense model for its contact center and reduced total cost of ownership by 40%.

Consumers vs. enterprise

For consumers, adoption is accelerating rapidly — it took only five days for the first public gen AI tool to reach one million users.

- Unlike consumers, enterprises need much more in terms of data security and privacy. For business, the time to begin incorporating generative AI is now.
- By 2026, more than 100 million humans will engage with generative AI to contribute to enterprise work. Gartner 2023
- By 2026, organizations that operationalize AI transparency, trust and security will see their generative AI models achieve a 50% result improvement in terms of adoption, business goals and user acceptance. Gartner 2023

"I'm extremely excited by the recent breakthroughs in generative AI that can help us move toward transforming our clients' businesses while accelerating their productivity and thereby driving significant impact."

— Ravi Kumar, CEO of Cognizant

Maximizing containment rates

Containment rates quantify the percentage of users who interact with a chatbot and can complete their business without ever having their call or inquiry escalated to speak to a live agent. Much of the success depends on the ability of the generative AI-powered chatbots to be able to interpret customer conversations accurately and provide more accurate responses.

Advanced ML algorithms can also be used to identify common issues or trends in customer conversations for more accurate responses. By analyzing customer feedback and conversations, bots can gain insights into what customers need and may even learn how they prefer their queries to be addressed. This would enable bots to provide more personalized services, which leads to higher levels of satisfaction from customers and improved containment rates overall.

With generative AI's analytics capabilities, companies can monitor bot performance in real time to identify areas requiring improvement or optimization. This helps improve bot accuracy, which means that containment rates will be significantly boosted over time as the generative AI-powered capabilities detect patterns and make corrections accordingly.

"Our partnership with Cognizant will accelerate enterprises' application of generative AI with more highly skilled AI experts, new solutions focused on creating business value, and deep experience applying Google Cloud technologies to industries like financial services, healthcare and life sciences, and retail."

— Thomas Kurian, CEO at Google Cloud

Cognizant: Committed to the future of the contact center

The contact center is the heart of the customer experience, so it's essential that it be future-proof and keep up with the changing needs of your customers. Digital transformation is a critical part of that process. It involves more than just moving existing IT infrastructure to the cloud and deploying new tools; it requires a comprehensive approach that spans the entire business and inspires every person to transform. At Cognizant, we understand the importance of reinventing the contact center, and we are committed to supporting all stakeholders in the transition with thoughtful, methodical change management.

Cognizant's approach is to help you create an end-to-end digital-driven contact center that modernizes processes, data and technology. We specialize in the transformation of contact centers across people, processes and platforms, with tools to accelerate the journey. Our dedicated contact center practice focuses on next-generation state-of-the-art technologies such as gen AI and CCAI, offering full support throughout the transition.

Cognizant believes in building a partnership that is focused on business outcomes. Our experts begin by understanding your current situation, challenges and key goals. We use customer journey mapping — a comprehensive methodology designed to promote understanding of the continuously evolving drivers of customer behavior and market context — to deliver highly personalized experiences at scale.

At Cognizant, we make it our mission to help you create the contact center of the future that is agile, efficient and customer centric. We are committed to supporting you every step of the way, from strategy to implementation, to ensure that your contact center is ready for the next era of growth.

![Cognizant logo]

About Cognizant

Cognizant (Nasdaq-100: CTSH) engineers modern businesses. We help our clients modernize technology, reimagine processes and transform experiences so they can stay ahead in our fast-changing world. Together, we're improving everyday life. See how at www.cognizant.com or @Cognizant.

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