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WHITE PAPER

Generative AI (GPT) and use cases in Customer Support

GPT and use cases in Customer Support

This white paper explores the potential of GPT-based AI models in technical customer support.

Technical support often requires a high level of expertise and specialized knowledge, making it a complex and time-consuming process. GPT models can be used to improve customer service by providing faster and more accurate responses to technical inquiries.

In this paper, we discuss how GPT models can automate steps in tier-1, tier-2 support tasks, such as troubleshooting issues in workflow and providing product guidance. This can help reduce ticket response times and improve overall customer satisfaction. We also explore how GPT models can be fine-tuned for information lookups in knowledge bases and technical documentation, allowing businesses to provide specialized product support.

We examine how GPT can be used to logically reason customer scenarios, allowing businesses to make data-driven decisions to improve their product offerings. We also discuss the potential of AI in augmenting support agents, providing curated responses, and improving overall customer satisfaction.

We provide real-world examples of businesses that have successfully implemented the GPT3 model in their customer support operations and the benefits they have gained. We also discuss the potential challenges and limitations of using GPT models in technical support and how businesses can overcome these challenges to leverage GPT models' benefits fully.

What is GPT?

GPT (Generative Pre-trained Transformer) is an AI model based on natural language transformation. GPT models are trained on massive amounts of text data, allowing them to generate human-like language and perform various natural language processing tasks such as text translation, question-answering, summarization, and text completion.

GPT-4

In mid-March, a new version of GPT was released by Open AI. Here are a few features that will enhance its capabilities and provide value to Support organizations:

- Better accuracy on prompt answers, in testing GPT-4 is 80% more accurate
- Cuts question and answer reply time in half (compared to predecessor)
- Has the ability to analyze image inputs and answer questions about them. In customer support, this might mean automatically analyzing customers' attachments.
- Add steerability, meaning better boundaries around specific topics, and the ability to specify the tone and style. For support use cases, it means only answer questions specific to a company and its products.
- Higher response word limit - the size of GPT3.5 is currently constrained to around 3000 words. GPT4 doubles this limit, and you can even configure larger limits
- Includes support for more languages.

Why is AI a big deal for Customer Support?

The support function can potentially redesign a company's customer experience, products, and services. With the advent of language models like LLMs, even small to medium-sized companies can create machine learning models of similar quality to those developed by larger companies without requiring expensive data and engineering resources.

In essence, LLMs are making ML capabilities more accessible to all. As a result, customer support teams can more easily comprehend the vast amounts of data they gather and quickly generate meaningful, non-robotic responses. These developments allow support staff to focus more on the human aspect of support rather than spending too much time searching for or interacting with tools.

According to a study by Zendesk, 59% of customers expect data to be utilized to personalize their support experience, a goal that is now easier to achieve. Management is increasingly taking notice of this trend, as evidenced by a survey conducted by Kustomer, which found that 84% of CX leaders believe personalization will be crucial in the next three years.

ChatGPT can help you respond to inquiries with more precision and speed, and it's not a question of whether you should adopt these technologies but rather how many potential use cases exist for their implementation.

Generative AI Use Cases for Support

With AI-models support team can understand customers' context and efficiently process text, image information through company knowledge bases. Whether you need to generate data for different use cases, AI can help mimic the creation of it.

Text based Conversations

A typical use case for this is chatbots, email assistance, and automated IVRs. These have been around since the early 2000s and used keyword matching and, in some cases, required specific phrases to be used.

Although not initially considered AI, they were the first attempts at automation; these can now be enhanced. GPT adds value in two crucial ways.

- It no longer relies on keyword matching as it can be trained on large datasets and can understand natural language intents (emotion, paraphrases) to provide a more natural way of communication.
- Gather more context and relevant data points from the data. Do reasoning and adjust responses to be more customer-focused.

Agent assist with Macros

Text expansions and macros have been a method for support agents to respond quickly to repeatable issues.

Although it can save time, there is still a lot of manual work involved in gathering contextual information and 'fill in' missing details.

Furthermore, the written content remains unchanged. As a result, customers over time can find the language as impersonal and robotic.

GPT eliminates these drawbacks entirely. It not only captures the necessary information automatically to ensure contextual precision without any human input, but it also generates fresh, natural-sounding responses each time, preventing it from becoming stale.

Logical reasoning SOPs

Having parity, quality of answers across support agents is hard. Depending on your business, you could use many different workflows or standards of practice (SOP) throughout the day. New agents and new product features may need training on the process and usage of those tools and products. This can take months to become fully effective, and hard to keep it consistent.

GPT has the capability to perform step-wise reasoning based on language and content of your tickets. Following SOPs and workflows that are expected to operate can assist your agents in real-time by providing guidance. In addition to suggesting the appropriate tasks for the agent to follow, the AI can automate necessary steps for tier-2+ nature issues, provided it has access to the appropriate tooling.

For example, if you are delivering a product and in order to refund it you need to look up the order number in one system and then go to the payment system to process a refund, AI model can then

- Read the customer ticket
- Recognize if a refund is necessary
- Recommend the workflow to complete that refund to the agent
- Provide the agent with a method to run all the actions necessary in one step.

This saves time and effort on the individual ticket as well as on the overall work quality of your support organization.

Knowledge Bases

Knowledge Management has existed in some form since the inception of support organizations. From the early days of the knowledge-centered support (KCS) model, used for developing, revising, and maintaining technical contents and documents.

However, similar to most models, it relied on human experts to write articles in a manner that customers could comprehend and implement, which is considerably more challenging than it appears. Customers have varying levels of skills, perspectives, and linguistic backgrounds, making it challenging to compose articles that are suitable for all of these differences.

With GPT-AI, recognizing a new ticket or a solution that has not been previously addressed becomes more straightforward. Given its familiarity with your products and services, it has the ability to generate articles for internal use or even dynamic content that caters to your customers' context and your company's voice and style. AI can potentially revolutionize how knowledge is created and distributed for customer services.

Summarization

When a voice channel is added, many support tasks become more complicated. Quality of services and ticket escalations, for example, have historically lost context. Required someone to manually summarize phone calls, handoffs, or other stakeholders to listen to the entire call.

However, LLMs make this task less complex and time-consuming. GPT's natural language AI models can transcribe and summarize calls more effectively than previous technologies by 'listening' to them.

Consistent and accurate summaries provided by AI enable agents to find information more quickly, locate previous tickets that were previously difficult to find. Overall helps agents to better understand customers' voices and score more of them.

Value-add for support workflows

Most customer service teams possess one or multiple scenarios that could benefit from GPT-powered AI models.

Nevertheless, it's crucial to realize that making the most of these tools demands some work.

If you're initiating an AI venture in your organization, guarantee that the tools you consider emphasize comprehensive model training and allow for customization of the settings that align with your requirements.

Model training and tuning

Training a complex machine learning model like GPT-3/4 requires knowledge of different techniques to achieve desired results.

Some of the available methods for deeper training require examples of the following:

- **Personalization:** This involves customizing the model to a specific user or group of users to enhance its accuracy and effectiveness.
- **Product lexicon:** This is a specialized vocabulary or set of terms unique to your business or industry.
- **Multimodal input:** This refers to using multiple forms of input, such as text, images, and audio, to train the model.
- **Languages:** This refers to the different languages the model can understand and generate.
- **Embeddings:** This technique represents words and concepts as high-dimensional vectors to enhance the model's performance.

To implement these deeper training techniques, you must provide GPT-4 with existing content, including both positive and negative examples of each.

This content will enable the model to learn and understand the patterns and nuances of your business or industry, thereby improving its accuracy and effectiveness.

GPT prompts and settings

With GPT's APIs, your company or vendor can adjust key communication settings to deliver the customer experience that meets your expectations. Here are some examples of what you can tweak:

- **Formality** - You can train GPT model to use either formal or informal language, depending on your company's brand identity and user preferences. For instance, a financial institution may prefer more formal language, while a fashion brand may opt for more casual language.
- **Empathy** - Although AI technologies are not typically empathetic, you can fine-tune GPT's language to understand better the user's emotions, which can create a more supportive and compassionate customer experience.
- **Politeness** - In most customer service scenarios, GPT needs to use polite language and avoid offensive or insensitive language.
- **Clarity** - Generally, you'll want GPT to use clear and concise language without technical jargon or overly complicated wording.
- **Brand Voice** - By using a consistent brand voice, GPT can provide a more cohesive service offering, a significant advancement in the field of LLMs. Maintaining your company's tone and language can help build a stronger brand identity.

Evaluating right AI solution

The above passages highlight the many factors to consider when developing an artificial intelligence strategy or assessing tooling solutions for your organization.

GPT-4 represents the culmination of years of research into AI, featuring cutting-edge NLP and LLM technologies, and is poised to transform the customer service industry.

With GPT, chatbots and agent assistance will no longer sound robotic and can comprehend and logically respond to natural language. They can be customized to meet your organization's high service delivery standards.

This new generation of tools that GPT offers will provide access to these advanced technologies for small and medium-sized businesses, which was previously not possible or affordable.

These tools will usher in a new customer service experience that is more engaging and efficient for customers while providing significant benefits for businesses. Leaders in customer experience prioritizing AI tools can meet their business needs and address the use cases mentioned above.

You can refer to the AI tool evaluation matrix [here](#). AI solution requirements such as features, integrations, reporting analytics, and security are placed on the side of evaluating vendors.

Please reach out to support@twig.so if you have any questions about GPT use cases in customer support, or visit twig.so