

How AI Can Improve Customer Service Conversations

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Abstract: *This white paper explores the challenges faced by healthcare organizations in enhancing member conversations through various access points, such as call centers, websites, mobile apps, and chat agents, and details a solution leveraging Generative AI. The document provides an in-depth analysis of current problems, the proposed AI-driven solution, and its benefits. It concludes with a transformative vision of member interactions in the healthcare sector.*

Keywords: generative ai, customer experience, healthcare, personalization, member interaction

INTRODUCTION

Effective and efficient member communication is critical for healthcare providers in today's digital age. Members desire seamless access to their medical information through multiple platforms, including call centers, websites, mobile apps, and chat agents. However, current systems are riddled with template-based responses that fail to comprehend user intent and past interactions, leading to member dissatisfaction and inefficiencies. This paper discusses how Generative AI can revolutionize these interactions by offering personalized, context-aware responses.

Problem Statement

Current State Problems

Members face several challenges when accessing medical information:

- **Template-Based Responses:** Current applications provide standardized, hardcoded replies, which often don't cater to individual members' needs, resulting in frustration.
- **Complex Jargon:** Responses frequently include intricate healthcare terminologies that members may not understand, such as deductible, copay, out-of-pocket expenses, and in-network and out-of-network terms.

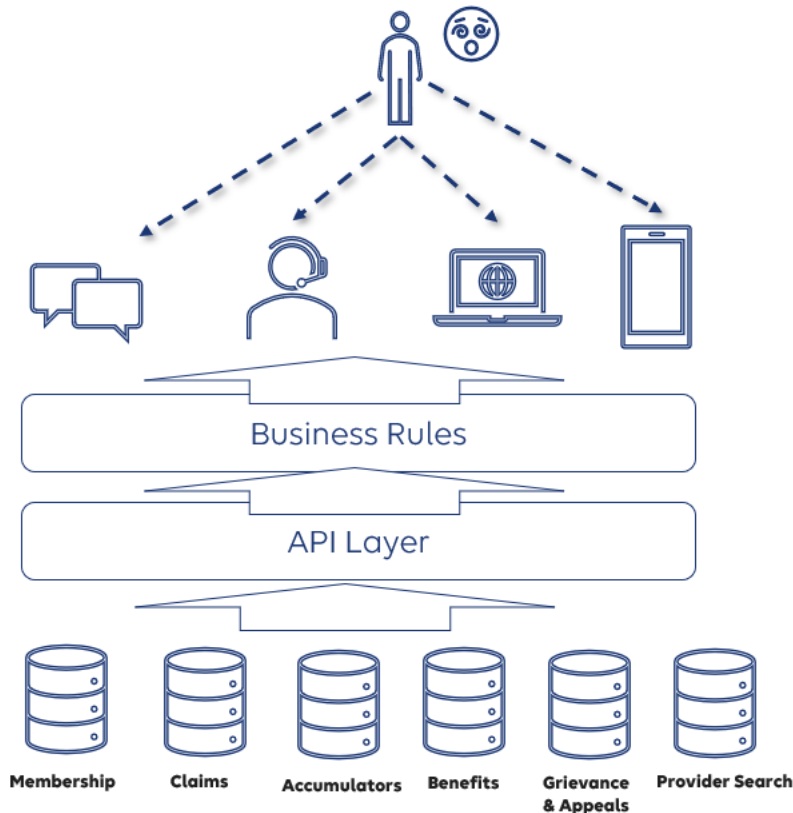
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- **Multiple Touchpoints:** Members often must contact customer service multiple times to get the information they need, leading to longer calls and member dissatisfaction.

Key Areas Affected

- **Membership**
- **Claims**
- **Provider Search**
- **Benefits**
- **Grievance & Appeals**
- **Accumulators**

Customer interactions – The Current state problems



Consumer Experience Framework

This framework enhances our understanding of how consumers interact with services and products. It highlights the diversity of consumer journeys, which do not necessarily follow a linear path.

The framework categorically divides consumer experiences into three primary segments: Shopper Experience, Member Experience (admin/profile), and Consumer Experience (services/products). Each domain addresses unique aspects of consumer interaction and offers distinct event numbering, although these do not always imply a sequential order. It suggests a multifaceted approach to evaluating the consumer experience, acknowledging that not all elements apply to every consumer situation.

In the Shopper Experience category, interactions are analyzed from the perspective of consumers engaging with retail environments. This may involve various stages of the shopping journey, from initial engagement with a product or service to final purchase. The framework uses markers to denote significant stages or touchpoints that could highlight pivotal moments in the consumer's shopping experience.

The Member Experience is more administrative and focuses on consumers as members of a service or organization. This experience could involve tasks such as managing subscriptions, accessing benefits, or resolving service issues—a layer that adds a dimension of ongoing interaction beyond mere transactions, focusing on service and membership maintenance.

Similarly, the Consumer Experience addresses the service/products domain, where consumer interaction centers on products and services rendered. It considers the consumer journey from initial consultation through purchase and follow-up. This part of the framework emphasizes crucial touchpoints involving clinical and administrative engagement with healthcare services.

Each experience sector, represented by a mix of events, signifies specific interactions contributing to the consumer journey. However, these numbers are not strictly sequential, indicating that the journey may vary significantly from one consumer to another. This variability forms a core part of the dynamic framework, reflecting real-world scenarios where consumer experiences are personalized and flexible.

By breaking down consumer interactions into these focused categories, the framework allows businesses and service providers to tailor their strategies based on their consumers' intricate needs. It is a tool for improving service design and delivery, ensuring that all aspects of a consumer's journey are considered, with the nuanced understanding that not every part of the framework applies universally.

Ultimately, this detailed overview of the Consumer Experience Framework equips organizations with the insights necessary to refine their consumer engagement strategies, enhancing satisfaction and loyalty across diverse fields and industries.

Solution

Generative AI for Member Interactions

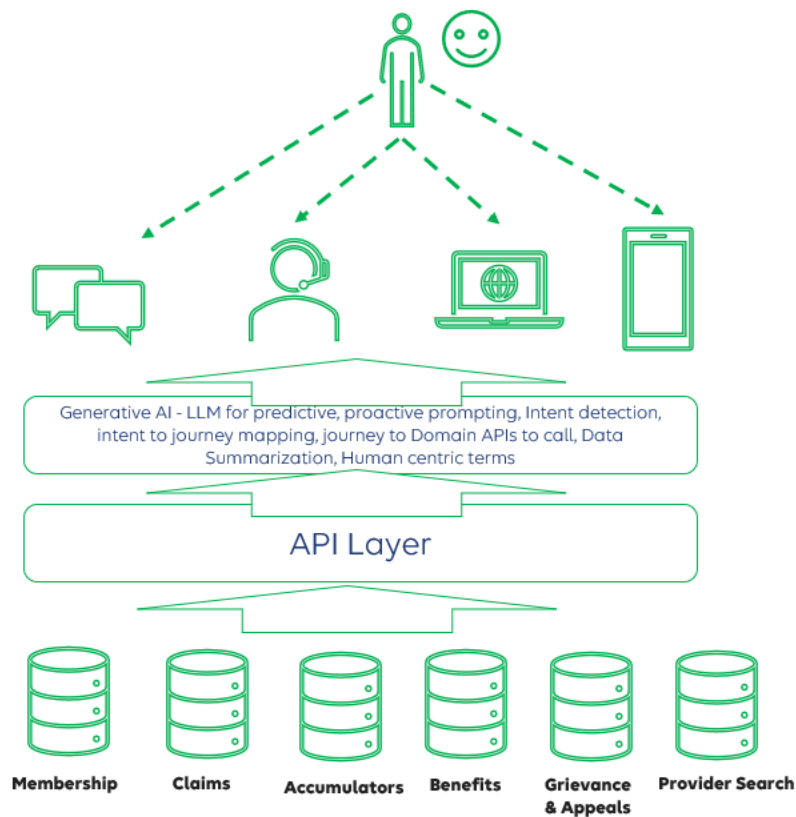
The proposed solution leverages Generative AI and Large Language Models (LLMs) to provide a more predictive, proactive, and personalized member interaction experience. This approach includes:

1. **Predictive Proactive Prompting:** AI anticipates member needs based on their profile, demographics, claims history, and past interactions.
2. **Intent Detection and Mapping:** LLMs detect the member's intent from their utterances, prompting for more context and mapping the intent to the appropriate journey or task.
3. **Human-Centric Language:** AI translates complex machine-formatted data into human-readable responses, improving understanding and engagement.
4. **API Integration:** The system triggers relevant Domain APIs to fetch detailed information swiftly and efficiently in JSON format, which the LLMs then restructure into user-friendly content.

Steps in the AI-Driven Interaction Process

1. **Profile-Based Prompting:** Using members' demographic and historical interaction details to prompt predictively.
2. **Contextual Understanding:** Identifying intent or prompting for more context to fully understand the member's request.
3. **Structured Task Execution:** Completing the required task, explaining a term, or providing specific insurance and benefits data.
4. **Human-like Response Construction:** Generating responses that are easy to understand, enhancing member satisfaction.

Customer interactions – The Future state solution



Challenges of the Solution

Disambiguation – The most challenging problem with any solution that utilizes AI or generative AI is ensuring the model does not hallucinate and provide incorrect answers. In this case, the member is trying to interact regarding health insurance queries. Providing an irrelevant answer will lead to frustration and may result in a call to Customer Service to express his concerns. This can extend call duration and erode the customer’s trust in the solution and the technology.

This challenge can be overcome by improving the efficiency of the testing. Early engagement of business counterparts and the customer experience team during the solution's development will lead to more proactive feedback. This can train/ground the model to provide relevant answers or not to provide irrelevant feedback.

Contextual Relevance – Contextual Relevance is related to the above-mentioned hallucination problem. If the member asks about the cost share details, the LLM should intuitively understand the context of his question. For example, he might have submitted prior authorization for an upcoming surgery or medical service and is now looking for the member's out-of-pocket details. In this situation, the LLM model should promptly identify the context before responding. The perfection of prompting or asking follow-up questions with members to determine the member's context is necessary here.

Member Privacy— Member privacy is pivotal in the health insurance industry. Though there are family-based coverages, the primary coverage holder might be authorized to access the dependent's health-related information. While responding to a member utterance/question, the member privacy and preference setting should be made accessible to the LLM so that the responses will be limited based on the member's preference and set limitations.

Legal, Compliance, and Regulatory Obligations—Lawmakers have been cautious about establishing AI regulations since the inception of generative AI models. This ensures the models are trained unbiasedly and do not produce biased results. In the context of member health and the patient care journey, we must be cautious to avoid errors that could lead to incorrect decisions.

Benefits of the Solution

Enhanced Member Satisfaction

By shifting from template-based responses to context-aware, personalized interactions, members will experience a more engaging and satisfactory service.

Efficiency Gains

Predictive and proactive systems reduce the need for multiple interactions, lowering call durations and easing the load on customer service.

Improved Understanding

Human-centric language aids in better comprehension of complex healthcare terms, helping members make informed decisions.

Time and Cost Savings

Streamlined processes and reduced call times decrease operational costs, benefiting the organization.

CONCLUSION

Healthcare providers must modernize their member interactions to meet their members' evolving expectations. Integrating Generative AI and LLMs offers a transformative solution that addresses current shortcomings and provides a more fulfilling and efficient member experience. By leveraging these advanced technologies, healthcare providers can ensure that members receive personalized, comprehensible, and timely responses. This transition will enhance member satisfaction and drive operational efficiencies and cost savings, leading to a more sustainable and member-centric healthcare approach.

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About the Author

As an IT Transformation Leader, I have harnessed artificial intelligence's transformative potential to tackle the healthcare industry's complex challenges. With over 18 years of experience in a Fortune 25 Healthcare Organization, I have developed a deep expertise in healthcare analytics. My thorough understanding of the U.S. healthcare landscape has been crucial in designing and implementing innovative AI-driven solutions that enhance member satisfaction, improve operational efficiency, ensure directory accuracy, and promote digital adoption. I have successfully published five white papers and am currently a peer reviewer for scholarly articles by researchers and professionals with similar interests.