

# A Conceptual Review on How Artificial Intelligence Techniques Can Help Solve Customer Engagement Issues

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**Abstract:** For the first time in history, all five generations are making purchase decisions. It means engaging customers has become tricky. There are prevailing challenges in handling this multi-generational customer base. The companies that offer products and services to customers from different generations and cultures need to find ways to engage their customers. Traditional customer service operations are costly and have different flaws. Advanced technology can play an important role with the help of humans. This paper discusses major customer engagement challenges, how Artificial Intelligence solutions can solve them, and what 'contact center AI' is.

**Keywords:** artificial intelligence, analytics, chatbots, customer engagement, machine learning, natural language understanding.

## 1. Introduction

Customers mean a lot whether you are selling products or services. With the right ways of engagements, existing users can be retained (and converted) and potential customers can be attracted. Customer interests have become volatile in this hyper-connected and fast-paced world.

Businesses selling products and services affect user/customer engagement alike. If you want to keep the existing users and get new ones constantly, you should identify the key performance indicators of your mobile app engagement. For instance, layout and design mean a lot if you run a website or a mobile application.

In this age of hyper-connected world, businesses can personalize their customers' experience with AI products and solutions. An intelligent customer engagement strategy helps keep users loyal to you. Culture, ethnicity, age group, and gender role play important roles in purchase decisions.

*What is customer engagement?*

"Customer engagement is the process of interacting with customers through varied channels to develop and strengthen a relationship with them."

As businesses struggle with sales, retaining existing customers is important than ever. Human beings are hard to understand. You can sell your products or services if you know what your potential buyers need. According to Gartner, customer engagement.

- Boosts brand experience

- Increases sales funnel velocity
- Improves customer experience
- Increases customer loyalty and trust
- Provides valuable customer feedback and insight

### A. Current Situation

In this hyper-connected world, satisfying customers has become an uphill task. Customer service division budgets are rising but customers are unhappy with the way customer service departments respond. Most of the customers use social media every single day and like to contact a business on social media if they have any queries or complaints. If you are not on social media, you are missing out big as a business.

### B. Future Trends

People have plenty of purchase decisions in their heads and their approach to making buying decisions is shifting. The future belongs to emerging customer service technologies. 95% of customers are looking for some degree of proactive communication from the companies with which they do business.

The main motto of this paper is to introduce AI and ML based solutions that would help businesses increase the engagement with customers/users and retain them for a longer tenure.

## 2. Customer Engagement Challenges

### A. Tight Schedule and Lack of Resources

Customer engagement can be the make-or-break point of your brand or company. Mostly, brands do not burden themselves with the task of making and implementing a productive strategy for better customer engagement.

For the strategy to prove beneficial for a brand, an adequate amount of time and resources are required. Brands lacking sufficient resources and time fail to interact with their customers effectively.

### B. Lack of Niche Skills & Certifications

Advertising and Marketing brands have astonishing marketing teams without a doubt, but client engagement is usually not one of their specialties. Hiring an expert solely to

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manage customer or user engagement is highly unlikely and to expect the marketing team to be an expert in all trades could be unrealistic.

**C. Isolated Data Systems**

In the world of today, no one wants anything less than what’s perfect. People demand the most updated facilities that lack in nothing. For instance, automated systems are in demand while outdated systems are utterly disliked. Brands that don’t run automated systems are incapable of attracting customers.



Customer Engagement Lifecycle

Fig. 1. User engagement lifecycle

**D. Inability to Support Global Markets**

Brands that are unable to work at a global level lose plenty of potential customers and have to suffer for that damage. For the swift and impactful growth of a brand, having customers worldwide is the key point. Many top branded companies, either small or large, miss on these opportunities by only dealing with their base market customers.

**E. Diminished Brand Loyalty**

Brand loyalty is critical for the progressive growth of a company. A 7% increase in loyalty can result in an 85% increase in profits per customer. Similarly, a 3% increase can reduce the cost up to 10%. However, the establishment of brand loyalty is entirely dependent on your brand’s ability to meet the customers’ rising standards.



Fig. 2. User engagement touchpoints

**3. Solving the Challenges with AI**

Businesses can now make smart and judicious decisions using AI. This way, increasing sales and improving the efficiency of communication becomes obvious. The germane way to engage with customers is changing fast due to Artificial Intelligence.

Statista.com writes that; “Forecasts suggest that revenues from the call center AI market will grow from around 800 million U.S. dollars in 2019 to around 2.8 billion by 2024.” AI-based call center operations do not need a big workforce.

Call center artificial intelligence (AI) market revenue forecast worldwide in 2019 and 2024(in million U.S. dollars) – Source: Statista.com

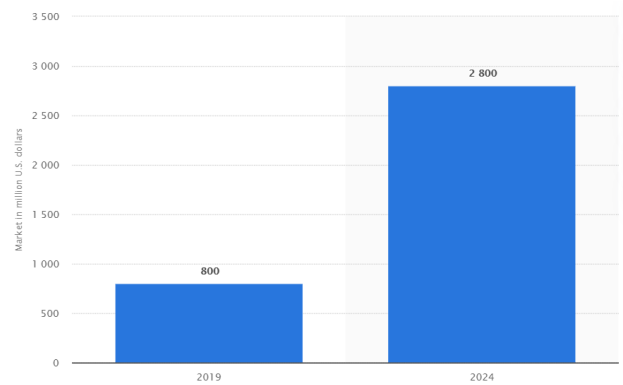


Fig. 3. AI market revenue forecast for contact center

**A. Finding New Customers**

A 50% increase in customers is seen in businesses that use AI to assist them, according to the results of a study presented in Harvard Business Review. What is most beneficial for companies is that AI can increase sales by productive customer engagement in the absence of salespeople. E-mail conversations are held with customers to engage and encourage them to be their regular customers. These methods are used until the customer figures out if they’re interested or not.

**B. Tracking Customers’ Activities**

The modern AI technology tracks customers’ activity on the website pages of companies and thus, has information of the customer’s every click. These give an idea as to what domain caught the customer’s interest or what page they visited several times or how much time was invested on a specific page of the website. They also have additional information like if someone called for support or if someone expressed their interest in a product by viewing its marketing campaign.

**C. Pairing Customers with Personalized Representatives**

AI can evaluate the results of the customer engagement plans and decide what benefitted the company the most and caused an increment in their sales. It can even distinguish customers according to their gender, locality, previously purchased items, etc.

**D. Personal Customized Message Service**

AI makes judgments regarding the behaviors of the customers based on their interests. It provides you with

personalized messages solely adapted for you, relying on the public information you share about yourself on the internet. This facility can help the company in many ways, one of which is, determining the right audience for the marketing campaign of a particular product.

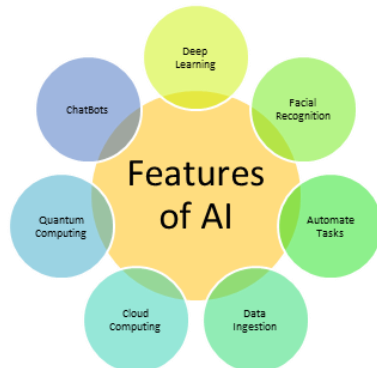


Fig. 4. Key AI features

#### 4. AI Solutions – Proposed Tools and Techniques

95% of customer interactions are expected to be AI-enabled by 2025 according to a research study quoted by Accenture. As organizations strive to make customer service more frictionless across channels—delighting customers and building brand loyalty in the process—they'll need to reimagine the role that service plays as part of the broader customer experience.

Conversational AI is an authoritative customer engagement solution. Such tools for Customer Engagement make customer service processes smooth across all channels. Customer service operations become efficient through AI. Some of the powerful features that will bring immense value have been discussed below:

**Conversational AI Platform:** It helps in swiftly design and execute automated conversations, compatible with the business' existing technology partner. The NLU (Natural Language Understanding) component is the one that will help extract intent and entities based on the user requests.

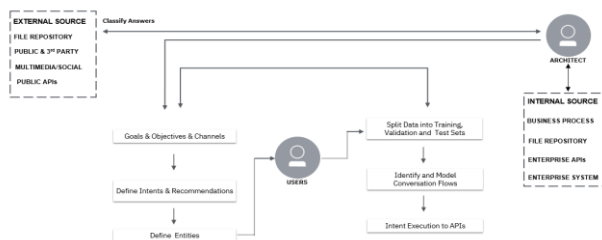


Fig. 5. Illustrative conversational AI platform flow

**Journey Containers:** Journey Containers help in accelerating the time-to-deployment with several pre-built virtual assistant conversations flows across various sectors.

**Customer and Journey Analytics:** It is here to generate insights around your specific business inefficiencies that unlock new business value.

**Adaptive Experience Builder:** It enables businesses to quickly create/manage hyper-relevant interactions by adjusting to real-time events and executing corresponding actions.

**Cognitive Operation Algorithms:** It analyses conversation performance through the service funnel and continuously improves and enhances the overall experience.

AI based engagement allows businesses to manage interactions between humans and Bots across multiple digital and voice channels with a collection of applications. Businesses can automate conversations using a single platform that can integrate messaging, chat, and voice channels with virtual and live agents. Some of the useful features that needs to be built are:

**Intent Discovery:** It helps you easily find out the customer motives best suited for automation. You can personalize it by uploading customized chat transcripts.

**Virtual Assistant Technology:** This industry-leading AI virtual assistants can speed up the resolution by predicting and orchestrating customer intent. It understands the natural human language and customer sentiment.

**Messaging:** Use self-serve tools to brand the business' customer-facing interface and stimulate it across digital channels, such as their website and social media messaging channels like Facebook Messenger and Apple Business Chat.

**Reporting:** Get at-a-glance views of consolidated data from all applications and use prebuilt dashboards to quickly optimize platform performance.

**Platform Services:** Integrate Engagement Cloud with your current ecosystem of enterprise applications and data sources to ensure a seamless customer experience.

#### 5. Challenges to Consider for AI implementation

The process to implement AI is not simple but the benefits are unlimited. There are key challenges that can be faced while implementing AI and here are some of them:

##### A. Economic Challenges

A virtual agent system can prove very beneficial for your company, economically. That is so, if your company offers chat agents in thousands or more, whether they are phone or text agents. They're supposed to answer the customers' questions without causing a delay. In addition, it saves the company, the hassle of hiring new employees. This system is favorable unless the automation process cannot be carried out due to inevitable reasons. For businesses that have not engaged in any digital transformation, it also adds to significant investment in the infrastructure of the entire AI implementation.

##### B. The Technical Challenge

Setting up a virtual agent system opens doors to technical difficulties. For instance, they have to seek information from the corporate systems related to some queries. If the customer intends to ask questions regarding their balance or the current status of their order, virtual agents will have to contact the corporate systems to deliver an appropriate response.

##### C. The Political Challenge

Switching over to a virtual agent system has a significant impact on the company's overall image and reputation. That is the reason, why for a total shift to AI- Technology, persuading

the higher authorities of the company can be a challenging task. This includes not only appealing to the executive head of customer services but also the COO, the Chief Information Officer, the sales' head et cetera.

#### *D. The Cultural Challenge*

The cultural hurdle refers to the willingness of the company to handle a change. Often, companies are not in favor of letting computers communicate with customers. Their perspective, being traditional, is that human interaction cannot be compromised and that, unlike humans, computers cannot deal with people efficiently.

### **6. Conclusion**

This paper discusses on various challenges and proposes solutions and expert systems that can be built to solve major issues with customer engagement through intelligent Artificial Intelligence techniques, Natural Language Processing and Understanding and Machine Learning algorithms. We can conclude that Artificial Intelligence is a revolutionary technology that is transforming many industries. The world we see today will be much different from the world we will see in the next 20 years. Customer service AI has become a reality with many phenomenal contact center AI tools available to assist businesses. Small, medium and large organizations can save time and money by implementing conversational AI algorithms. Artificial intelligence tools for Customer Engagement such as the ones proposed in this paper will bring

immense value to businesses. If businesses are not satisfied with the performance of their traditional customer care operations and want to adopt next-generation customer service, they should adapt for a suitable and customized AI solution for customer service department.

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