

## AI chatbots as a customer service and support tool

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### Abstract

COVID-19 pandemic put the focus of businesses on the need for digitalisation and automation of customer service, support, and providing self-service solutions to adapt to the fast-changing business environment and customers' expectations and needs. Chatbots were already taking a place at the top of the list of business solutions when the pandemic and the usage of conversational AI made them a must-have to help businesses solve various challenges. The paper presents three case studies for using chatbots by customers of Umni, a no-code platform for creating, managing, and training AI chatbots, that reveal how chatbots are helping businesses, employees, and customers through instant assistance and routine automation.

**Keywords:** chatbots, conversational AI, customer service, customer support, AI chatbot, automation, digital transformation, chatbot challenges, chatbot usage results

**Type:** Practice paper

**Citation:** Stoilova, E. (2021). AI chatbots as a customer service and support tool. *ROBONOMICS: The Journal of the Automated Economy*, 2, 21

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## 1. Introduction

COVID-19 did not bring the need for automation, digitisation, and robotisation - it only forced the adoption and sped up trends, behaviours, habits, and technology usage that were already here years before the pandemic. Technology added an important layer of benefits on top of what businesses and consumers were already aware of, such as convenience, better customer experience, speed of service, time savings, and resource savings. The focus shifted to biosafety, which digitalisation and automation provide through touchless, contactless, digital, mobile self-service solutions and robotics. The pandemic put digital self-service under the spotlight of the businesses in many industries because it was the fastest way to adapt to the pandemic.

Before the COVID-19 pandemic, the banking, healthcare, and retail companies relied heavily on chatbots for the provision of customer support (CBInsights, 2020). Currently, the limited face-to-face customer service interactions, the lack of staff, and the need to decrease the cost, increase the importance of chatbots. In 2020, Gartner (2020) named digital self-service as the core activity businesses needed to maintain to help them recover. Chatbots were listed in the top five solutions to implement. CBInsights (2020) also included AI chatbots among 25 technologies that will shape and change the world and the business in the post-pandemic time.

### *What is a chatbot and what can it do?*

A chatbot is a software solution implemented on a website, in a messenger, in a mobile application, or elsewhere providing users with information through text, images, video, audio, links, and more. Chatbots can perform a variety of tasks from answering frequently asked questions to automating reservations, service inquiries, gathering customer information, questionnaires, and more. The functionalities of each specific chatbot depend on the business needs, where it will be implemented, and with whom it will communicate - with clients, partners, or employees. As per Juniper Research (2020), 43% of the existing chatbots are located on websites versus 48% in messengers, and it is expected the number of chatbots located on business websites to increase. Web-based AI chatbots can act as a first contact point for customers and answer FAQs.

Before the pandemic, chatbots were known mainly as a tool for digital marketing and were used for marketing campaigns, collecting emails and phone numbers, and for push notifications for news and promotions. The pandemic put the focus on the need for fast contactless remote online customer service and communication. Chatbots provide businesses with many benefits and opportunities in this regard. Many businesses have focused on automating routine tasks and customer service using chatbots – to take customer questions and inquiries 24/7, to provide instant information, to check status or to accept a service inquiry, to make a reservation. This is the first line of service that bots do well and is usually routine work for the employees that they would gladly not do themselves.

Automating communication and implementing an AI chatbot has already recognised benefits such as generating more local business, promoting the business, reducing costs and resources, engaging more with customers, attracting new markets through a new digital experience, getting data for better planning, and others. Upgrading the chatbot with conversational AI allows the business to collect customer questions and turn them into data, train the conversational AI with the proper answers and gradually increase the level of automated service. The more customers ask, the smarter the AI module becomes, the more data and statistics are collected, and the more businesses know about customer behaviour to make intelligent decisions.

## 2. Case studies

### *2.1. Case study 1: A chatbot for a travel agency*

The chatbot was implemented by a leading tour operator in Bulgaria and the Balkans region. Its implementation in 2019 was most useful for two departments: Reservations and Marketing. In Reservations, the staff communicates directly with tourists, provides information, and makes reservations. In Marketing, the staff takes care to promote the company's products in all channels and keep up-to-date information everywhere.

The company has identified several communication issues that could be solved by a chatbot. Messages on social media and the website became so numerous that it took an average of 4 to 6 working hours per day for an employee to chat with customers, make offers, collect inquiry information, and provide general information. Since the communication was done by a person, the answers were not instant and there were often delays. Also, there were many calls aimed only at information, but not a potential reservation.

The chatbot was implemented to solve the main problem of saving time due to a large number of repeating conversations with clients for information about standard procedures. These standard procedures are available on the website such as methods of payment, how to make reservations, necessary documents, visa requirements. For employees, it took over 15 questions to collect the information needed for preparing a travel offer for a customer.

The main tasks assigned to the tour-operator chatbot were assistance in all steps towards reservations, collecting information for inquiries, providing general information about destinations, visa requirements, telephone numbers, company addresses. Other main tasks include answering other frequently asked questions, providing links to the company website to direct traffic to the website, collecting emails and customer phones numbers for marketing purposes, and providing statistics.

As a result, the tour operator noticed that the created chatbot provided information to staff and customers instantly, accurately, clearly, and conveniently. The chatbot collected many emails from direct customers upon their choice, which are used in email marketing afterwards. In the first 10 months of its implementation, the chatbot communicated with over 4200 customers one or more times and replied to nearly 30,000 messages, an average of 140 up to 350 messages per day on busy days. It collected over 1100 successful inquiries as well as over 700 customers subscribed to the company newsletter through the chatbot. The company noticed that the chatbot took the night duty in the team as it instantly processed inquiries between 19:00-8:00 - on average 35% of all inquiries received, with a night peak in communication with the chatbot between 20:00-23:00. The chatbot saved an average of 10 to 12 minutes per customer in the Marketing Department and the Reservations Department or over 850 working hours to the staff. The employees' satisfaction also increased due to their time optimisation and routine tasks automation.

The main challenge faced while using the chatbot was the customers' level of competence regarding the technology and lack of experience using it. Some customers didn't realise they were communicating with a software solution while others wouldn't go through the entire process of sending an inquiry through the chatbot.

## *2.2. Case study 2: A chatbot for a beauty studio*

The business is a small beauty studio that offers various aesthetic procedures and therapies for face and body, and health and beauty consulting since 2012, with 80% of its new customers coming from a referral. In early 2020, the owner considered converting the studio to be fully digitalised for beauty and aesthetic procedures. This led to implementing an AI chatbot for automating the communication with new and repeat customers in all steps of making, amending and cancelling an appointment, and finding an answer to a question.

The main goal of the owner was administrative tasks to be fully digitalised. The studio researched its customers and discovered that they did not expect a person at the reception to consult them on a specific issue. Customers wanted to make, change or cancel an appointment quickly, or ask a question with immediate feedback, easily, and without committing much time and effort. They also needed assistance after work, on a Sunday night, when there was nobody at the studio to pick up the phone.

An AI chatbot was implemented for 24/7 assistance to the beauty studio customers to answer frequently asked questions through predefined information and conversational AI. The chatbot was used to make, change, check on or cancel appointments through an integration with the studio appointment reservation system, to easily access and book promotions. A price calculator was added to the chatbot for procedures and therapies booked in a package.

As a result of the chatbot implementation and its active promotion on social media, 20% of the beauty studio new customers have made their first reservation through the chatbot and 30% of customers use only the chatbot to make an appointment (the rest have a reservation from their previous visit). 100% of customers who want to take advantage of a promotion at the beauty studio, make a reservation through the chatbot. According to the owner, every day there is at least one reservation made through the chatbot. The overall customer feedback was extremely positive. The main reasons for customer satisfaction are the chatbot's convenience, instant assistance, and saving time.

In addition to finding the right AI chatbot service provider, the beauty salon's main challenge was the preparation for the project. Customers' adoption of the AI chatbot was also considered. It was necessary to invest in and take time for analysis, questions, and surveys with customers, as well as to define well the customer path in the chatbot to remove difficulties for the customers and to optimise the chatbot.

As the beauty studio strives to make the AI chatbot an increasingly perfect assistant for its customers, the studio gave the chatbot a name, made competition among the customers for choosing an avatar for the chatbot, created a user manual so customers could learn how to benefit most from the AI digital assistant and created various social media educational campaigns involving those customers who actively used the bot.

### *2.3. Case study 3: A chatbot for a municipal library*

This Regional Library is the oldest cultural institution in the third-largest city in Bulgaria and a leading library institution in the country. Digital transformation is in the focus of the library's activities in the past years. The library had noticed several communicational issues. The library staff was not available 24/7 and at the time when customers would search for information. An outdated telephone or written correspondence in the library had been replaced by modern communication channels, such as e-mail, online chat, and messenger. These features took a lot of time and effort from the librarians to handle and interrupted their daily tasks affecting their performance.

The decision to implement an AI chatbot as a digital librarian was taken as part of the measures to restructure and optimise the work process. The tasks assigned to the AI chatbot upgraded the existing services. The use of an AI chatbot was mainly focused on providing information on topics most widely used in the communication "reader/user-librarian-reader/user", as well as performing searches in the library database. Created in 2019, the AI chatbot for this library became the first AI digital assistant librarian in Bulgaria.

The implementation of the AI chatbot for the library customers resulted in saving time to at least two employees who have performed these activities and had been redirected to other tasks that correspond to their qualifications. The chatbot took 30% of the requests for re-assignment of borrowed literature and led to an exponential increase in communication between readers and the library. It extended the working hours of the library and successfully replaced employees after 17:00. Before the launch of the chatbot, the messenger channel was used negligibly little. During the first quarter of chatbot usage, the number of exchanged messages increased to an average of 600 messages per month. By December 2021, the AI module of the chatbot was trained to over 10,000 customer questions.

According to the library management, through its timely and personalised help, the AI chatbot became part of the library's overall strategy for attracting users. The chatbot provided an opportunity to take full advantage of technologies that effectively save time. The implemented innovation allows processing a huge amount of information in a short time and is useful to the library customers and staff.

The problems with the implementation of the AI chatbot were related to the need for continuous monitoring of chatbot conversations, the initial definition of a wide range of topics on which the chatbot can respond, analysis of the used conversation means, and the continuous addition of conversation topics to the chatbots.

### 3. Conclusion

Due to the variety of tasks and services that an AI chatbot can perform and automate, today the questions are not about the technology (could it do it or not) but to the businesses that add digital assistants to their list of service solutions: *What will the chatbots do? What tasks or processes should they optimise? Is the business ready to implement a chatbot into its daily operations?* While chatbots can answer frequently asked questions and automate routine tasks, such as the collection of information for orders, inquiries, appointments or perform other tasks through integration with business software and platforms, the overall quality of the self-service through a chatbot is based on the thorough planning of all steps and details in the chatbots implementation. Companies with a focus on creating, maintaining, and training AI chatbots for their businesses need to go through proper planning to automate, answer their frequently asked questions and routine tasks for improving customer service and support. The business has to consider the level of technology adoption of their customers, optimisation, and simplification of all steps in the customer path through the self-service via chatbot, the promotion of the chatbot, and customers' education on how to use it. Last but crucial also is the need for continuous chatbot data monitoring and AI training to ensure its proper development in accordance with customers' usage and needs.

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Received: 28/11/2021

Revised: 12/12/2021

Revised: 15/12/2021

Accepted: 16/12/2021