

Data Science with Python : Types of Chatbots #5657

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BATCH : 7

WHAT IS A CHATBOT ?

- A chatbot is a computer program that simulates and processes human conversation (either written or spoken), allowing humans to interact with digital devices as if they were communicating with a real person.
- Chatbots can be as simple as rudimentary programs that answer a simple query with a single-line response, or as sophisticated as digital assistants that learn and evolve to deliver increasing levels of personalization as they gather and process information.

TYPES OF CHATBOTS

Classification of chatbots depends on two things -

1. Problem you're trying to solve.
2. Functionalities you're trying to incorporate

Depending on that, following are the types of chatbots:

- Support Chatbots
- Skills Chatbots
- Assistant Bots
- Transactional Bots
- Informational & Information Gathering Bots
- Conversational Chatbots

TOP TYPES OF CHATBOTS

THE FUTURE OF AI



1 SUPPORT CHATBOTS

Designed to solve a specific problem, support chatbots require context awareness, a personality and multi-turn capability. Most of the support chatbots use deep learning and natural language processing to perform actions.



2 SKILLS CHATBOTS

It's a single-turn-type chatbot that doesn't require much of contextual awareness. It can just follow a command to perform an action.



3 ASSISTANT BOTS

Assistant bots, like support bots, need to be good at conversations and answering FAQs. They must also be entertaining to maintain user interest.



4 TRANSACTIONAL BOTS

These bots can be roughly classified into assistant bots as they often act on behalf of humans to perform various transactions. For example, placing an order, making a reservation etc.



5 INFORMATIONAL BOTS

Information gathering bots can act as research assistants by extracting as much information as possible either from a human or from an internet resource like a website or an ebook.



6 CONVERSATIONAL BOTS

Several put conversational bots as a separate category but with the current user requirements and technology, each bot must be able to have a conversation with a human in some way or another. Hence, all types of bots are ultimately conversational chatbots.

1. Support Chatbots :

- Designed to solve a specific problem, support chatbots require context awareness, a personality and multi-turn capability. They should be able to walk a user through a business process and answer wide range of FAQs. Most of the support chatbots use deep learning and natural language processing to perform actions. Speech recognition is optional for support chatbots.
- A support chatbot finds use in all industries - majorly in retail, human resources, digital marketing and healthcare. Use of chatbots for consumer services in all these industries is becoming a necessity as it saves business resources, and improves customer satisfaction rate.

2. Skills Chatbots :

- It's a single-turn-type chatbot that doesn't require much of contextual awareness. It can just follow a command to perform an action. For example, a skills chatbot can follow the command 'switch on the lights' readily, with its speech recognition functionality. A skills chatbot requires powerful NLP features as well as must be quick to work.
- Amazon's Alexa has great skills chatbots feature, though it's a bot that can be classified into several types of chatbots.

3. Assistant Bots:

- Assistant bots, like support bots, need to be good at conversations and answering FAQs. They must also be entertaining to maintain user interest. The most successful example of assistant bots is Siri by Apple, which can not only assist the user with several tasks like fetching the news, making a google search, setting reminders etc but also responds in a funny way if it doesn't understand the query.
- There are several assistant bots that can integrate with existing platforms like Slack, Facebook and websites to assist with relevant business processes.

4. Transactional Bots:

- These bots can be roughly classified into assistant bots as they often act on behalf of humans to perform various transactions. For example, placing an order, making a reservation etc. Several custom solutions for transactional bots are possible, helping users increase their productivity as the bot interacts with external systems to perform transactions.
- Transactional bots find use in several industries just like support chatbots.

5. Informational & Information Gathering Bots :

- Both types of bots help either in collecting or in distributing information. For example, a news bot (an informational bot) can send push notifications or offer news recommendations to users with use of AI and text classification technologies.
- Information gathering bots can act as research assistants by extracting as much information as possible either from a human or from an internet resource like a website or an ebook.
- Information gathering bots are very relevant in the education and corporate training sector as well as in the digital marketing sector for research-based tasks.

6. Conversational Chatbots :

- Several put conversational bots as a separate category but with the current user requirements and technology, each bot must be able to have a conversation with a human in some way or another.
- Hence, all types of bots are ultimately conversational chatbots.

APPLICATIONS OF CHATBOTS

Chatbots today are being deployed across industries to assist customers (customer service), or engage with customers (sales and marketing), or do both. However, there are a few chatbot applications that are unique to each industry.

Different applications of chatbots in six key industries:

- Retail and e-commerce
- Travel and hospitality
- Banking, finance, and fintech
- Healthcare
- Media and entertainment
- Education

Application in Retail and e-commerce :

In a highly competitive market like retail and e-commerce, you need to engage in personalized conversations with customers to grab their attention and get them to a purchase decision. But when you have a growing customer base, engaging in 1-1 conversations might not be viable.

Here's what an e-commerce chatbot can help with:

- Product and price notifications
- Card abandonment
- Purchase assistance
- Post-purchase customer service

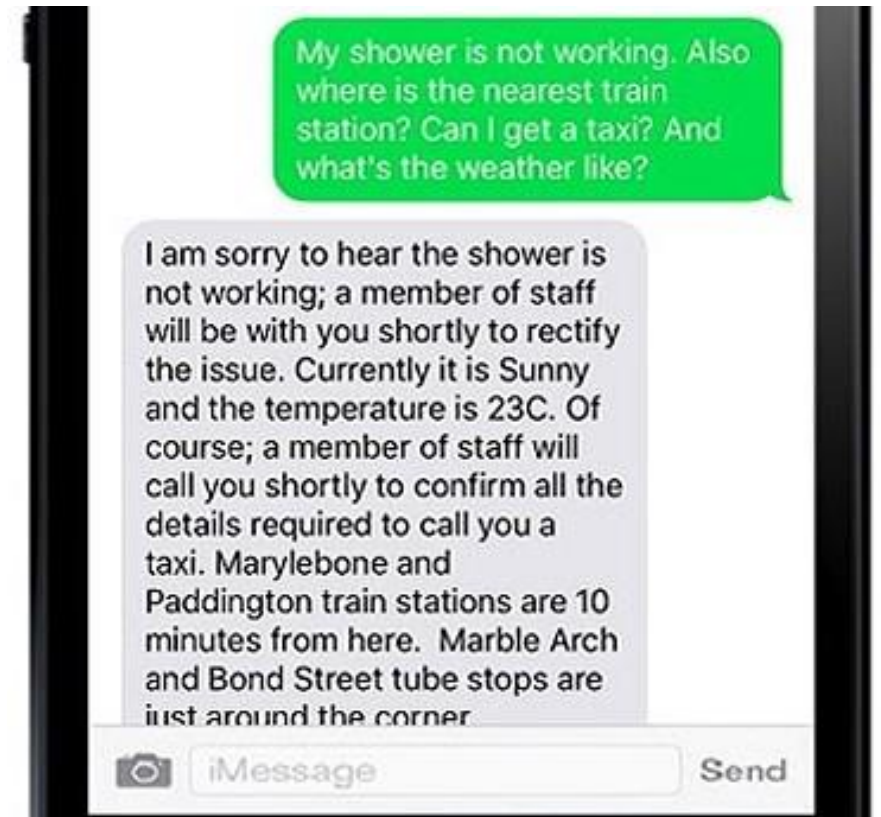


Application in Travel and hospitality :

Just like e-commerce and retail, customers in travel and hospitality prefer personalized experiences (planning a vacation can get quite tedious!).

Chatbots can provide a range of services in customer service from customizing itineraries to managing bookings and reservations. The most popular applications of chatbots in travel and tourism have been listed below:

- Reservations
- Bookings
- Refund or reschedule assistance
- Ordering and delivery

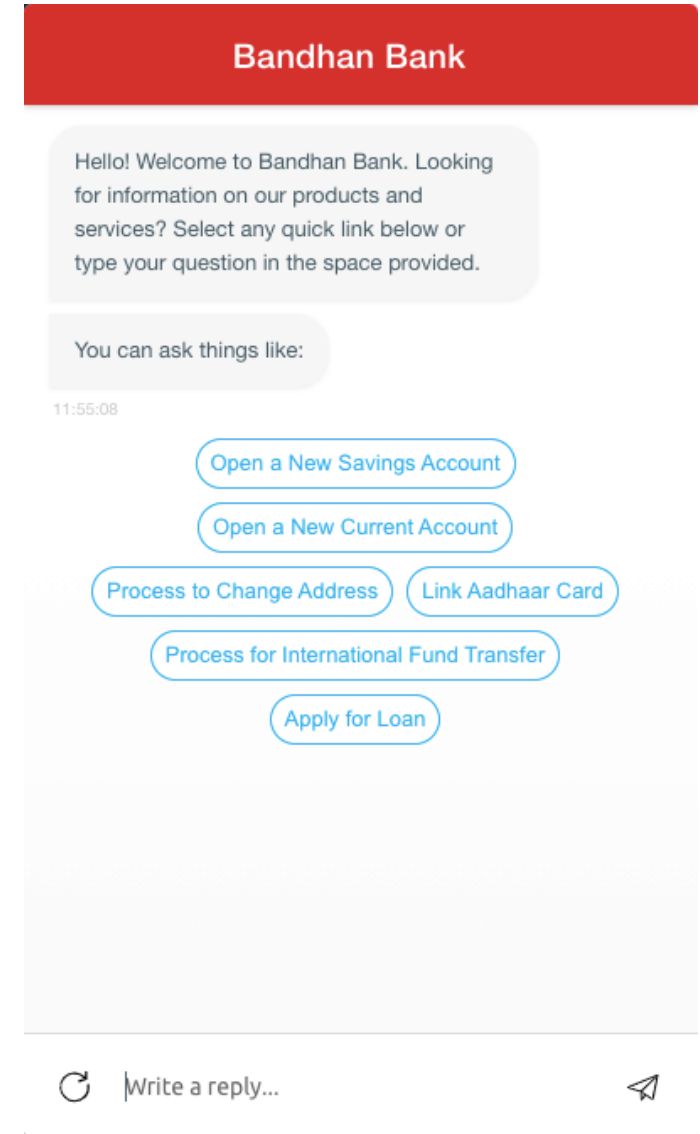


Application in Banking, finance, and fintech :

Customer issues in banking and finance often require immediate attention. Chatbots provide fast and accurate responses, making them increasingly popular in this space.

By implementing conversational banking, you can ensure that customers have access to immediate help whenever they reach out to you. In addition to offering 24/7 support, here are a few other use cases of chatbots in banking:

- Personal financial information
- Loan services
- Banking services

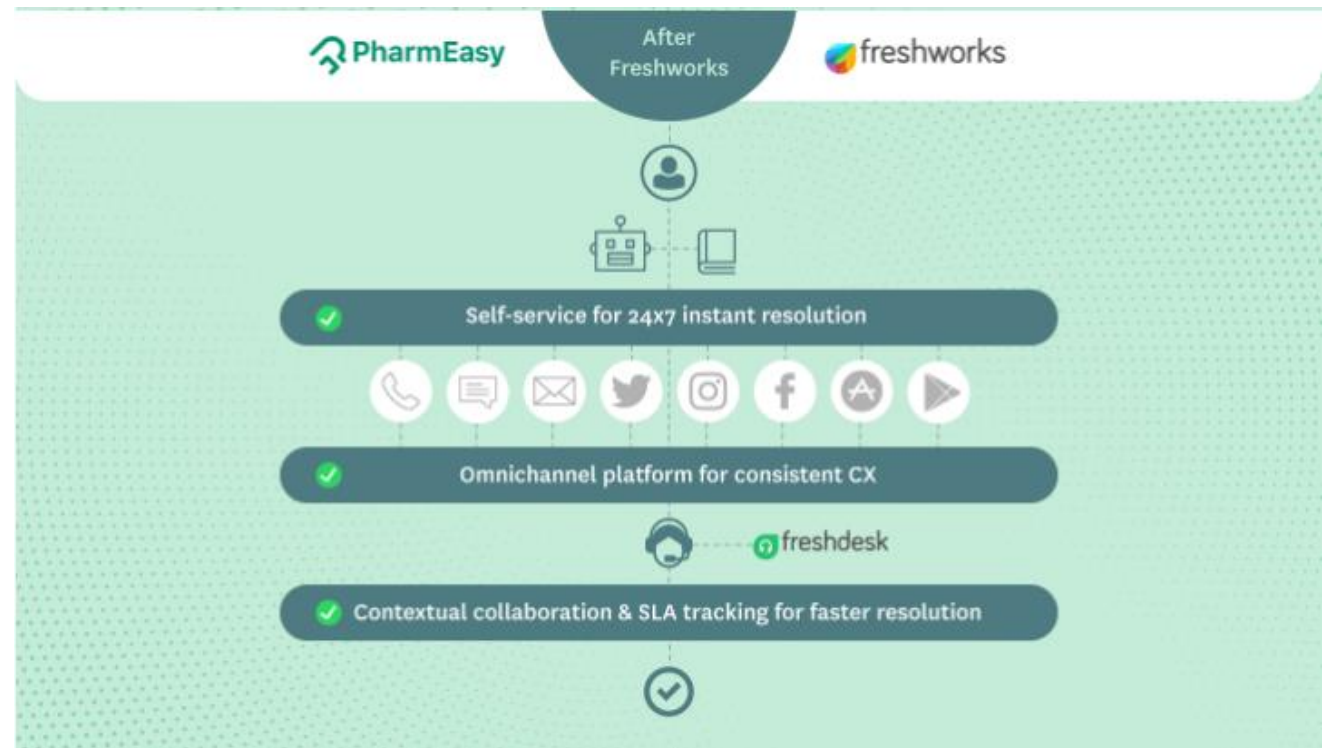


Application in Healthcare :

Chatbots have proven to be very helpful in the healthcare industry, especially in recent times when hospitals and other institutions are required to minimize queues and gatherings.

Here are a few ways in which chatbots reduce in-person interactions:

- Billing and insurance processes
- Appointment booking
- Conversational self-service

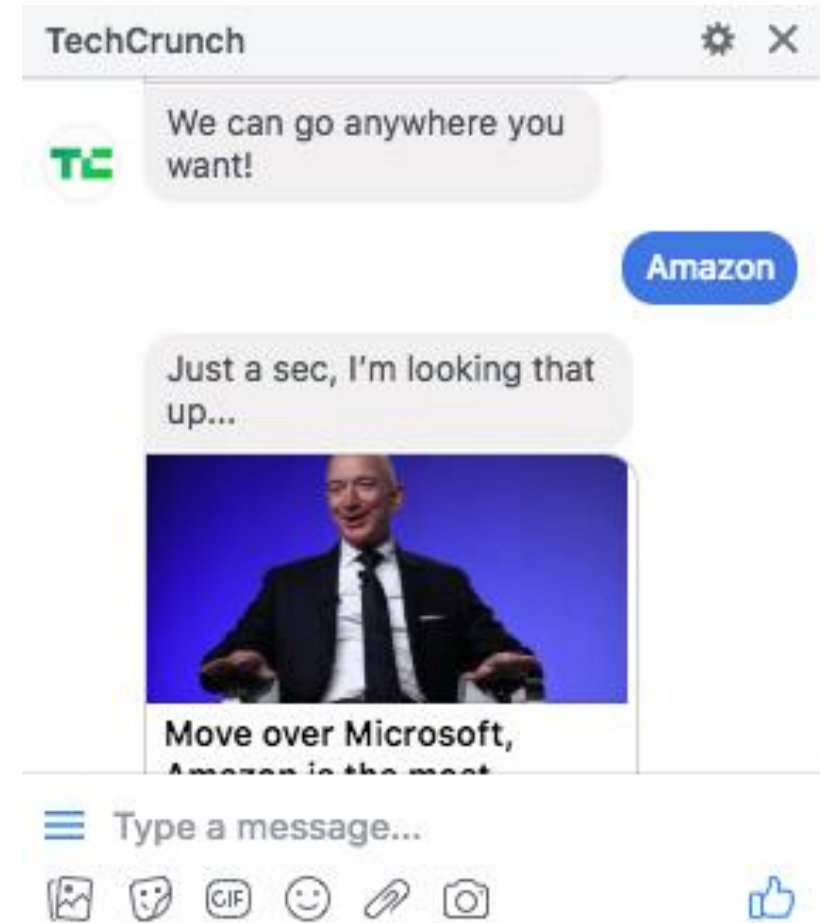


Application in Media and entertainment :

Right from delivering snapshots of the latest news, to assisting customers with their subscription management, chatbots applications in the media and entertainment industry play a vital role today.

Here's how:

- On-demand content
- Subscription management
- Installation and maintenance

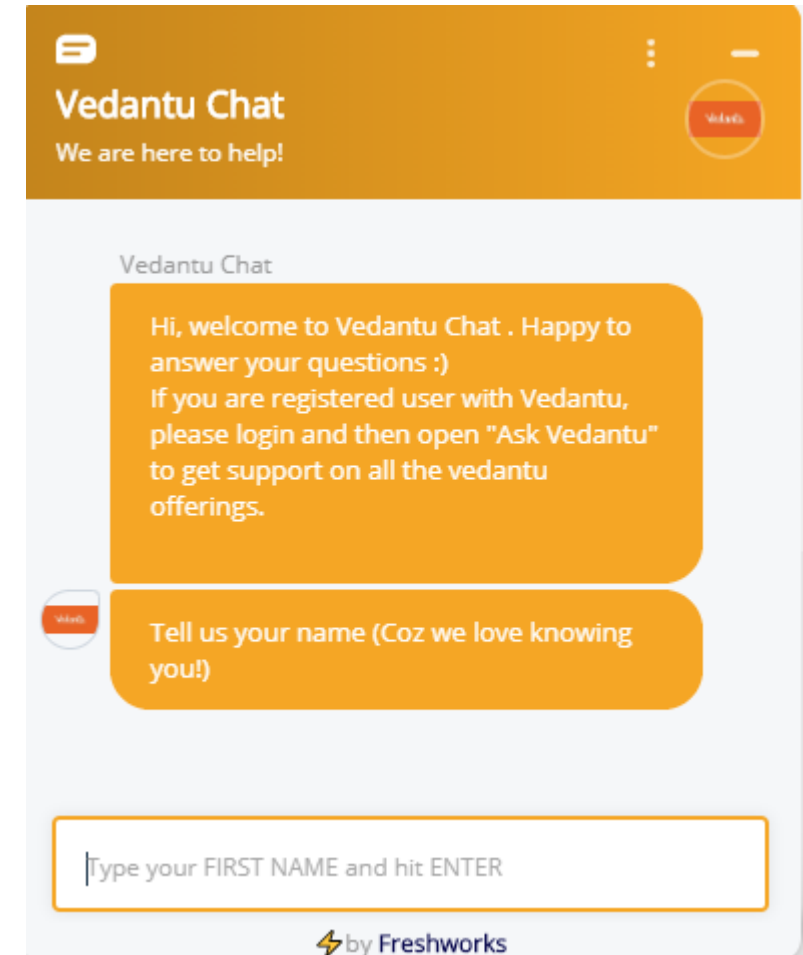


Application in Education :

Providing assistance to over a thousand students can get quite challenging for universities and other educational institutions. However, by deploying AI-enabled chatbots, these educational institutions can easily tackle the large volumes of queries.

Here are a few chatbot applications in the education industry:

- Student assistance
- Announcements and updates
- International student assistance



RESOURCES

- <https://www.oracle.com/in/chatbots/what-is-a-chatbot/>
- <https://www.hurekatek.com/blog/types-of-chatbots>
- <https://freshdesk.com/customer-service/chatbot-applications-blog/>
- <https://www.engati.com/blog/types-of-chatbots-and-their-applications>

THANK YOU