

# Chatbot training

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**How to use training data to provide fully automated customer support**

## Chatbot training

**The way we communicate with customers is constantly evolving. The current trend favours new forms of communication such as WhatsApp, Facebook Messenger or website chats. Without realizing it, customers are increasingly communicating with chatbots. For the bots to interact like humans rather than robots, they need to be trained using individual training data, created by Crowd Guru from Berlin. It is possible to train even fully automated customer support.**

### **The forms of communication are constantly evolving**

What does Crowd Guru do exactly? The crowdsourcing company provides training data to facilitate i.e. machine learning and to train chatbots. Stand-out feature: As the input comes from real people, the chat simulation is realistic. Classic communication channels are hotline or email communications. Both are associated with waiting time and often with costs. This is where the greatest advantage of chat comes in: It is a real-time medium. Customers can use chat to get

an instant response to their question: They are greeted and get a quick response to their query. Queues, high costs, long response times and irritated customers - those days are quickly becoming a thing of the past. *"Chats and messenger services have already become a fixture in people's day-to-day communications"*, says Hans Speidel, CEO of Crowd Guru. *"There is no need to make people aware of the new technology, as they already see its advantages."*

Chatbots were already the next big thing a few years ago, but failed in practice: They were not considered to be practical, fast or smart enough. What has changed? Chatbots have become "smart" thanks to more effective training!

### **Fully automated customer support**

Crowd Guru has trained fully automated customer support for a large telecommunications company. This was done in three successive

### **What are chatbots?**

Chatbots are programs that automatically interact with users usually using text. The efficiency of such a system depends largely on the underlying data.

### **Where are chatbots used?**

Chatbots are typically used in user and customer communications. Examples include the Poncho weatherbot (Facebook), "virtual assistants" such as Anna (Ikea) or chat systems integrated to websites.

steps:

1. Annotation of existing chat logs (entity / intent)

For bots, only certain sections are relevant to formulate the correct answer. When the customer asks "Hello, how are you? How can I disable Wi-Fi of my router? All the best & thank you!", only the words "Wi-Fi", "router" and "disable" - the entities and intents - are relevant; the rest of the sentence is not necessary to answer the question.

2. Categorisation of customer responses by emotions

It is important to adjust the response of the bot to fit the mood of the customer: Is the customer irritated or friendly and relaxed from the outset? The better the bot is able to recognise the mood,

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the sooner it can help to deescalate the situation.

3. Formulation of potential customer questions  
This is particularly relevant to the performance of bots, as these questions are used to train them. The above question from a customer can be worded by another customer as follows: "How do I switch off Wi-Fi?". While the intent is the same, the wording is different. The answer needs to work with both questions. To do this, the bot must have a large database to provide the same response when the input differs but the intent remains the same.

The challenge was particularly to formulate different questions that have the same intent. Thanks to the many crowdworkers working in parallel, this could be achieved within a remarkably short time.

### **With full service and quality control to smart chatbots**

*"What is special is that we can dock our solution on to almost any point in the process, provide selective support and implement entire orders",*

explains Speidel. The customer only has to be more involved at the beginning to define which results are important and to supply input data, where necessary. Crowd Guru's full service then covers the entire process of job creation, briefing, support, quality control and delivery in the desired format. *"Our full service consists of a three-stage quality control, including prequalification, automated pre-screening and final double verification"*, says Speidel. Customers can focus their efforts on technical development and fine tuning. Long and expensive follow-up controls are not necessary.

Result: Customers achieve quick results and improve the company's image. Their questions are answered quickly and to their satisfaction. Customers do not longer have to browse endlessly through FAQ – they can use the chat to get instant answers. This automatically reduces the workload of the other support departments

**Crowd Guru** is a German crowdsourcing service provider and one of the pioneers and market leaders in the German-speaking market. Besides machine learning and algorithm training, its services include categorization, content moderation, content creation, research, product data management and lead generation. It processes over 30 million micro jobs according to crowdsourcing principles every year.



such as telephone and email support, where employees can take more time to process complex and time-consuming queries.



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