Caden Maxwell **v 0.1**

# Natural Language processing and chatterbots

## What does it do?

Chatbots date back to 1966 with the first chatbot “ELIZA” however you may know chatbots as the latest ‘Alexa’ or ‘Google Assistant’ or even ‘Cortana’. Chatbots used to be text-based where you would type out a sentence, and they would reply, they wouldn’t be able to have a conversation with you like today’s chatbots can. However they were mainly used for therapy sessions, these ‘sessions’ weren’t beneficial and they usually just replied with “How does that make you feel?” and simple questions like that, but as time went on chatbots evolved and we got chatbots like Evie and Cleverbot.

Evie used the API of Cleverbot, so they were similar. However, Evie had one distinct difference. Evie had a face and a voice, she was able to communicate through sound, and facial expressions and the most exciting part about Evie was that she collected the conversations from everyone using the chatbot, and would adopt her lexicon to be able to converse with a broader range of communications. She was able to keep up with the popular slang of the time and became very popular among internet users and started to spark the interest of chatbots.

Natural Language Processing or (NLP) works in conjunction with chatbots, without NLP, chatbots would suffer significantly from either bad conversation or just the wrong response. An NLP allows the chatbot to collect the users’ input and construct an intervention based off its own AI. Without an NPL a chatbot would essentially just be receiving a text input and would only be able to

Today we are used to the likes of ‘Alexa’, ‘Siri’ or ‘Google Assistant’ which not only performs what previous chatbots could but also allows us to control devices in our homes or get news from local sources using our voices from across the room. Today chatbots are compatible with a lot of different devices that have changed the way we automate our lives, and we can use them to turn off and on lights, play movies on our tv, lock and unlock doors and more.

The possibilities that chatbots can do today already seem unlimited; however, over the next few years, we could see some brilliant things happening with our home automation and even something outside of our house. Cars are becoming more advanced especially with the rise of the Teslas and the fantastic technology that they come equipped with, Tesla has already started with their own chatbot, however now it is constrained and only works on Facebook Messenger, but give it three years and you might be able to tell your car to park out the back using an Alexa device from your room or ask it to unlock before you even leave your house.

The evolution of chatbots are a considerable focus in technology, Home automation systems have gotten prevalent, and now they are being pushed to be better and better. Typical chatbots would generally reply purely based off of user input and a lot of the time the chatbot would not have an answer. But with the growing increase of Artificial Intelligence (AI) chatbots will become more advanced and personal, they will be able to learn things about the user making the experience much more efficient. Instead of the user asking for something the chatbot might be able to ask the user if they should perform an action based off of previous knowledge.

## What is the likely impact?

With chatbots ever growing and becoming more advanced the way we go about our day to day lives will drastically change, a lot of the things we would do manually will be done using our voices, taking away the need to get up and turn the tv off, or switching on a light or turning on the oven or microwave, there is an abundance of things that could change. We would no longer need to go grocery shopping. Our houses would be automated so that everywhere in the home you could tell it to do something and it would be able to act on the request.

A substantial demographic that would be affected by this would be elderly and the disabled, for a lot of these people, it is difficult to do things manually and require assistance. However, with the use of chatbots, they would be able to do a lot of activities without having to put themselves in danger.

Mostly with the advancement of these chatbots, it would significantly improve the quality of life of users. However, there is always the concern of privacy, and in today’s day and age, privacy is a big worry, and we don’t know who is listening to us and when.

Chatbots aren’t suited for the work environment, as they are more used to convey information. An excellent example of how these could be used in the workforce, however, is when someone needs to type out long transcripts of conversations like in courts, the transcriber could ask their chatbot assistant to listen and type out the conversation. Then the transcript can be later checked over to make sure it’s feasible for the job. Chatbots are used to replace jobs but to enhance the ability to do a job.

## How will this affect you?

I use chatbots every day already, I mainly use it to control my lights, music and I ask about the weather, I also use it to help me get around on my food delivery trips. I am ready to accept future chatbots into my life to help improve the quality of life of my home or work experience and am excited to see where the future of chatbots can take us.

In my household, we have a total of 3 Alexa units, one in my room, my sisters’ room and in the kitchen, and we each use them differently every day. My sister uses hers to help with her studies in high school and the kitchen Alexa is used for recipes, timers and to add some comfortability to the home and play some music where we can gather and hang out. Alexa has increased our togetherness of our family and has made doing simple jobs like cooking and cleaning much more enjoyable and comfortable.

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