**Corona Help-Bot**

**Abstract:**

The coronavirus outbreak has major consequences for society worldwide. People are rightly concerned and have many urgent questions. The World Health Organization provides answers to frequently asked questions regarding the coronavirus on their website. However, you may have to search for a while before you have found the right answer to your question. It is vital that people are well informed about current measures. A covid HelpBot could perfectly help with this! This way we can efficiently limit mass spread. This will help those who need information or help to know more about this virus.

This project aimed to implement chatbot to assist with questions related with covid-19. It uses a neural network with two hidden layers (enough for these QnA) that predicts which pattern matches with the user’s question and sends towards that node. More patterns can be added from user’s questions to train it for more improved results and add more info about coronavirus in the JSON file. The more you train this chatbot the more it gets precise. The advantage of using deep learning is that you don’t have to ask the same question as written in JSON file cause stemmed words from the pattern are matched with user question.

**Block Diagram:**

**Training Data:**

To feed the data to chatbot I have used json with possible question patterns and our desired answers.   
The JSON file used for the project is intents  
For this project, I have named my JSON file as intents.json  
In the JSON file tag is the category in which all those responses fall.   
patterns are used for listing all possible question patterns.   
responses contain all the responses with respect to the patterned questions.

Diagram

Description automatically generated

**Bag of Words:**As we know neural networks and machine learning algorithms require numerical input. So out list of strings won’t cut it. We need some way to represent our sentences with numbers and this is where a bag of words comes in. What we are going to do is represent each sentence with a list the length of the number of words in our model vocabulary. Each position in the list will represent a word from our vocabulary. the position in the list is a 1 then that will mean that the word exists in our sentence, if it is a 0 then the word is nor present.

