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Natural Language Processing
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10/04/15

<u>Amtrak Dialog System</u>

After speaking to the system in many different ways, I found that the system did a pretty decent job in directing me to a schedule that I would want to take. It was able to comprehend almost everything I said even when I changed my accent. As long as the accent didn't change the consonants in the word and each word was pronounced relatively clearly, the system was able to recognize the request and asked the proper follow-up questions. I noticed that it would ask one question at a time; it would allow the program to narrow down what the user was searching for. For example, it would begin by asking if you want to see schedules, status, reservation information and then it would ask what city you are departing from and then ask which city you are departing to and finally it would ask the date. I attempted to ask one long question after saying that I am looking for schedules, "Schenectady to New York, April 21", but the system did not understand. I also noticed that you could interrupt the system in order to speed up the process. The system doesn't take things into context in the same way as other searches such as Google Now or Siri. It was clear that the system was very constrained in the sense that you had to respond based on what it asked, you could however say "I would like to go on April 21st" and the system would be able to filter through the irrelevant words and get the date. I don't think the system understood too much about language, it only understood it phonetically and it would match what we say with a pre-existing list of possible choices in the system. It was clear that the system only had knowledge about the different Amtrak stations which exist in the US as well as the schedules of all these stations, in order for the program to understand some of the words if they were mispronounced it would have to use statistics to 'guess' the word based on what it sounds like. It would also be good if the program had some knowledge on basic sentences so it could understand something like: "I would like a schedule for all the trains departing from Schenectady to New York on April 21." This would expedite the process of searching for an appropriate time to take the train. One last thing I wanted to point out was that if the system believed that it wasn't able to help you because it wasn't able to understand you after a few times it would refer you to a human representative in order to continue the conversation.