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Section 1: Basic performance analysis of the speech quality

Deficiencies: The program has been able to extract all information correctly, and output them as project require, but maybe in performace perspective could be improve

Challenge: The challenge I face was at the very beginning of my assignment try to extract information out of the file, it took me a while to find out the way to extract informations, but eventually I figure out. By looking at the type of brackets that are use to surround the information

Disscusion: The most interesting observation I got is that the understanding state of the dialog system. The very last part of the section 1 asking us to find the state of the current turn and see does the system understand what user is either inform or request. I can see the relationship between system understanding and highest score hypothesis. Sometime system just doesn't get any information, or system would recognize user command as request after a request which cost an error. All these details gave me more understanding of how system work

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Section 2: Automatic annotation of dialog state change

Deficiencies: The way I extracting require information and if statements makes the program look really unclean, the checking state mechnique could be improve that checking is a lot more accurate with more comparison.

Challenge: When I first working on this section I was really confuse on what kind of information we are trying to extract from the file, I understanding the problem but do not know where to start and where to look at. After figure out what are we using, than the next problem was why do we need to use log file. These are all simple problem that could be solve, but for some reasons these took me a while to understanding the way to solve them.

Disscusion: I had a better understanding of how system keep track with the states changing after working on this assignment, and how system sometimes still misunderstand user inform even they actually has what user ask for. The state tracking giving us the idea of how goals are set in each turn and how they got change

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Section 3: Automatic generation of dialog feature information for miscommunication detection

Deficiencies: my featuregen.py has the same problem of dlgann.py, the coding style is not too clean and I beleive there is better way to do this than if through all kinds of conditions.

Challenge: I thought this is going to be a easy task when I first start this, but I run into more problem than I would compare to section 1. The problem was extracting slu-hyp is complicated because they are list with in list and dictionary, so when I was working on it I dint see the first list which cause me when i trying to see if slot are empty they couldn't be detected. I pretty much has to redo everything after I figure out the problem, but I fixed it.

Disscusion: By comparing the highest scoring of each turn and see how they change or not, allow me to understand how system when they require to guess they will use the most common or highest possibility hypothesis to giving the answer. I was wondering how they guess when they are not in error but having trouble understanding the user input.

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There are so many way to improve the dialog system,I think it would be the best allow system has a better understanding of what user inputs are or maybe provide more trainning data to decrease the error rate so the system would have better understanding of all kinds of situations