**CPE 372/641 Natural Language Processing**

**Individual Homework 4: Dialogue Agent**

***Due April 30, 2020 via Piazza***

In this homework, you will implement rule-based dialogue agent (Eliza style) in Python that has one of the following capabilities.

1. Dialogue agent that can **answer questions on the topic that you choose** (car, covid-19, etc.). This is similar to Automated Technical Support system from this website. <http://dhconnelly.com/paip-python/docs/paip/eliza.html>
2. Dialogue agent that can **detect personality of user and provide conversations that match user’s personality.** To do this, you should study from chapter 21 of SLP book about Big Five characteristics (such as extrovert/introvert).

In order to do this, you need to study about overall dialogue implementation, plan your rules/patterns and substitution in keeping the conversation for its purpose (This is called ‘scripting’ for your dialogue system). **Select to do 1 or 2. Don’t do both.** Your systems should contain more than 20 patterns. Whether you decide to do 1 or 2, you can study from <http://dhconnelly.com/paip-python/docs/paip/eliza.html> to have overall pictures and see examples of patterns and rules.

**Deliverable - One pdf file that contains:**

1. Source code that contain patterns/rules.
2. Screen shots of testing your system (i.e. conversation with your bot)

This homework will be graded on how the conversation flows with your bot which depends on how you script you chat bots.