

# CSSE 413: Artificial Intelligence

## Dialog NLP Lab Manual

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- [20 pts] **Parsing.** Please document which types of sentences your robot can successfully parse. You do not need to use a CFG.
  - Up/down/left/right
  - Move/go up/down/left right
  - Again/ do that again
  - Not left/ do not go left
  - Please move up/down/left/right carefully
- [20 pts] **Keyword Search.** List the *five* variations that your system uses in case of a successful keyword search.
  - "I think you want to me to ",
  - "I believe you are gonna ",
  - "I assume that you want to ",
  - "I suppose your next step is to ",
  - "I understand that you need to me to"
- [10 pts] **Request for clarification.** List the *ten* phrases that your system uses to request clarification.
  - "I am sorry. I don't understand. Please try another command",
  - "Could you try a more specific command?",
  - "Please be more specific on your command",
  - "Could you provide more details on the direction?",
  - "I did not get you. Can you try something else?",
  - "I am confused about your command. Could you tell me again what you want me to do?",
  - "Still cannot get your idea. Can you try another command later?",
  - "Can you tell more about your idea in the next command?",
  - "I am sorry. I did not get your command. Can you provide additional information?",
  - "I am lost. Can you say more things on the next command?"
- [50 pts] **Human-robot Interaction (HRI).**
  - Does your robot have a name and can they report it? \_\_Yes. \_\_
  - Can your system name the robot and can the robot remember it? \_Yes, you need to ask for its name first \_\_\_\_\_

- What personality does your robot have? \_\_\_polite and friendly\_\_\_\_\_
- What additional *three* features did you implement that maintain a friendly work environment:
  - i. \_\_\_It can tell jokes\_\_\_\_\_
  - ii. \_\_\_if a user takes more than 1 min to give a command, the robot will suggest the user to take a break\_\_\_\_\_
  - iii. \_\_\_it can remember a sentence as a note for when user need it\_\_\_\_\_
- [10 pts] **Extra credit:** Add a speech-to-text component.  
Did you implement this component? \_No\_\_
- [10 pts] **Extra credit:** Add a text-to-speech component.  
Did you implement this component? \_No\_\_

Paste a sample dialog here, that demonstrates your systems capabilities. Ensure it covers at least one phrase from each of the items (2) – (5) and all of the three additional features from (5)(d). Feel free to err on the side of plenty.

- ➔ Move right
  - Got it!
- ➔ Do that again
  - Wow!
- ➔ Not left
  - Excellent!
- ➔ Please get to right
  - I think you want me to go right
- ➔ Sing a song
  - I am sorry. I don't understand. Please try another command
- ➔ What's your name?
  - I don't have a name. What do you want to call me?
- ➔ Tina
  - My name is Tina right now!
- ➔ What's your name?
  - My name is Tina. Do you want to change my name (Y/n)?
- ➔ Y
  - What do you want to call me?
- ➔ Ann
  - My name is Ann right now!
- ➔ Ann goes up

- Excellent!
- ➔ Nice job!
  - Thank you! I'll continue to work hard
- ➔ Tell me a joke
  - "What do you call bears with no ears? B."
- ➔ Turn on timer
  - Timer is turned on
- ➔ (wait for 1min) Left
  - You've thought for more than 1min, do you need to take a break?"
- ➔ Turn off timer
  - Timer is turned off
- ➔ Take my note
  - What do you want me to remember?
- ➔ Today is Monday
  - I got your note
- ➔ Show my note
  - Your note is: Today is Monday