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C951 – Intro to Artificial Intelligence

Task I

A. Chat Bot Functionalities

The bot will start after it is greeted with a "Hi" or "Hello". If neither of those words are used, it will give an "error" message instructing the user on the proper way to get started. After an introductory message, the bot will ask the user a series of questions, each with "this" or "that" answers to traverse a tree of options and end a job that meets their requirements. The question options are presented as buttons to make answering simpler and to deter from spelling errors. If the user wants to restart the conversation, the bot will recognize the command "restart". After the options have been exhausted and a job has been found, there will be a short description of the job, a link to the job's page on WGU's career page, and a button to restart the conversation.

B. Computing Jobs

- UX Designer
- UX Engineer
- Web Developer
- Back-End Developer
- Data Analyst
- Cybersecurity Analyst

C. Code Files

Included in the submission

D. Training Cases

Case 1: Student A likes to work on things that end users will see, but still likes to program, which would result in "UX Engineer".

Case 2: Student B likes to work on things behind the scenes and has an interest in working with data, which would result in "Data Analyst".

I used AIML's button function to give the user clear options. This function simplifies and categorizes the users' interests, ending with a job that would best fit their criteria. In both cases, the first thing a user is asked is whether they like front-facing or back-facing projects. In the first case, the user is then asked a few questions about whether they prefer solely designing or have an interest in programming. In the second case, the user is prompted to choose the thing they are most interested in out of three options. In the end, both cases are prompted with a "try again" option if they feel the results don't resonate. I visualize the results as a spectrum, with forward-facing preference on one side and back-facing on the other. The first question separates the user into one of the sides. The more the user wants to design, the further left they will go, and the more the user wants to program, the further right they will go. Case 1 would result in being on the left side of the spectrum, but closer to the center than if their result was "Web Developer" or "UX Designer" because they answered yes to a programming question. Case 2 would result in being on the right side, but closer to the center than if their result was "Cybersecurity Analyst" or "Back-End Developer" because they answered no to a programming question.

E. <u>Installation Manual</u>

1. Through your preferred browser, navigate to www.pandorabots.com
2. Log in or create an account if you don't have one
3. Using the left navigation pane, select the directory tab
4. In the search bar, type: "Cole Linke C951"
5. Click "Cole Linke C951" in the search results to initiate the bot
6. Click the orange bubble with a speech bubble in the bottom right corner of the window to open the chatbot window
7. Type "Hi" or "Hello" to get started

F. <u>Chatbot Environment</u>

<u>Strengths:</u>
1. One strength of Pandorabots is that it provides an insert function for templates of things you will use a lot (categories, buttons, and links). This is helpful because it saved me time while writing the code for my bot.
2. Another strength of Pandorabots is their online code editor and real-time bot chat window. This is helpful because you can work on your chatbot from anywhere you have an internet connection. The real-time chat window allows you to seamlessly check the logic of your chatbot as you work.

Weaknesses:
1. One weakness of AIML is its limitations. Although it is similar to HTML, I found it hard to get the formatting that I wanted to display.
2. Another weakness of AIML is its query response. The chatbot will only respond to a query that you have coded it to respond to. If the user misspells something or has a grammatical error, the bot will not respond with the intended answer unless you have planned for that exact error.

G. Monitoring and Maintaining

- The first thing I would implement after deployment is to add more job results. Right now, the binary tree of decisions is a full binary tree with a height of 3. I would like to have a total of 16 jobs so that it becomes a perfect binary tree with a height of 4, giving the user more options.
- Another thing I would like to add is a more personal greeting. Currently, the bot responds with a simple nameless greeting and starts asking questions. I would like the bot to ask for the user's name and then use that name as it continues to give the user a more personalized experience.

H. Panopto Recording

Panopto Recording

I. Sources

Sources were used for job descriptions.

Back-End Developer Career. (n.d.). Western Governors University. https://www.wgu.edu/career-guide/information-technology/back-end-developer-career.html

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