ITSV 412: Final Project Write-Up

My ultimate goal with the project was to create a ChatGPT powered simple assistant that operated as a Slackbot to be used through Slack that I could tweak and give an intriguing and more charismatic and varied personality, something that would be more fun to interact with than ChatGPT even if a little less helpful. Unfortunately, I ran into a lot of issues with tutorials being outdated and code libraries being null and void. I started off entirely on my own efforts and learning, looking through tutorials on YouTube using Google and Bing to find appropriate resources on building a slackbot and integrating OpenAI’s tools.

I researched the steps and made a Slack, a Slack app, and a Slackbot, and retrieved tokens for the use of each. I then went to OpenAI’s API system and made an API and generated a token for it as well. After all this base work is when challenges started arising. I generally use the Spyder IDE for any Python coding I do, as in my experience it provides a better experience for Python-specific coding than PyCharm and Visual Studio Code (a great tool but its greatest strengths lie in being a multi-lingual editor rather than being particularly supportive to Python which I am most comfortable with, in my opinion). An early issue however, was finding that it was better to have something that ran more effectively in terminal. So I downloaded Microsoft’s distribution of Python 3.12 to create my virtual environment and install packages in the directory, while still writing and doing a basic level of code testing with the warnings and info provided by Spyder. Originally I was using a tutorial that used Langchain, a tool meant to take tools like LLMs and make them easier to work with in a code base and give them easier functionality with platforms like Slack. Langchain’s public code libraries, especially those relating to OpenAI, have changed significantly in the short time since the tutorial I watched, and I could not understand even with research of Langchain’s site how to fix it after many attempts and research of sites like StackOverflow for quick-fixes or solutions did not turn up any valuable results. Eventually, realizing I was at a dead-end, I scrapped the idea of using Langchain in that form and used ChatGPT and Microsoft Copilot to provide me code to operate the bot without this intermediary. After making sure the code made use of all the tokens at my disposal and having a number of handlers that would take care of the Slack side. I got to installing Slack’s tools for this operation and once again was met with warnings of libraries and imported data being unusable or out of date or to import different tools and a problem verifying the authentication tokens although I’m sure they were correct. By this point my time to work on the project was extremely limited and unfortunately led to the incomplete and unworking code on my project. It is possible that I could have been only as far away as a small payment to support the APIs and a few hours of research into Slack’s tools away from reaching a solution but was left without the time to do so. I now have documented the existing code and write-up in this GitHub repository and will be able to reference it should I need it for future work on this type of project or a similar one again.

**References**

ChatGPT

Microsoft Copilot

StackOverflow.com

[5 Must-see Tips for Perfect Email Writing (youtube.com)](https://www.youtube.com/watch?v=9AXP7tCI9PI)

[How to build a chatGPT chatbot on Slack (youtube.com)](https://www.youtube.com/watch?v=qKZLDEIL2r0)