

Florida International University
Knight Foundation School of Computing and Information Sciences

Software Engineering Focus

User Manual

Project Title:
Stars Tutoring Chatbot

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1. Introduction

Purpose

The main purpose of this project was to create and update the Tutor Bot and a Code Bot that would help students learn Computer Science concepts through chatbots. Its purpose is to help you learn and help you translate your code to prompts in order to more effectively describe what your work is and the concept you are trying to learn.

Audience

This manual is intended for future STARS users to help them understand how this project works and operates.

2. Getting Started

System Requirements

- Recommended to use windows operating system
- IDE of your choosing that can run python

Installation

Clone the Repository

```
git clone https://github.com/your-repository/stars-tutoring-chatbot.git
cd stars-tutoring-chatbot
```

Install Dependencies

```
pip install streamlit pymongo langchain openai
```

Configure Environment Variables

```
Set up your OpenAI API key:
export OPENAI_API_KEY='your-openai-api-key'
```

Configure MongoDB

Ensure MongoDB is running locally or update the connection string in main.py to match your MongoDB instance.

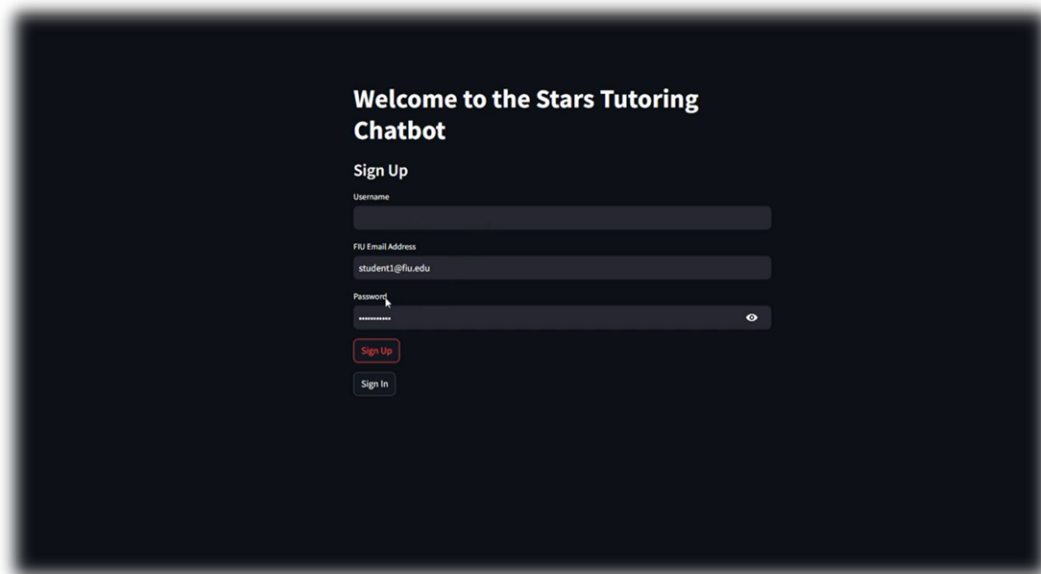
Run the Application

```
streamlit run main.py
```

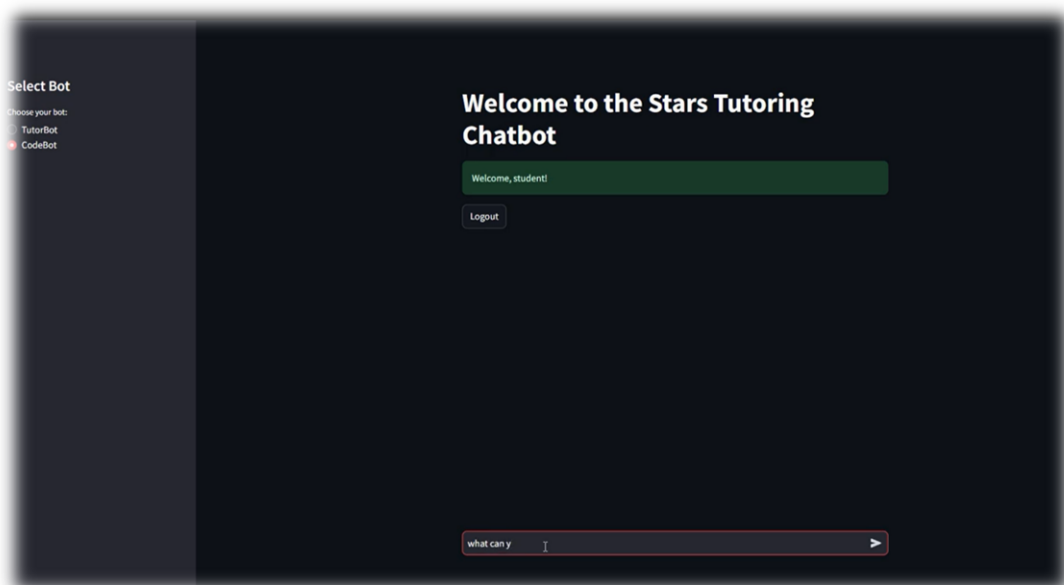
3. Navigation

Overview

1. When you start, you are going to want to login if you have an existing account otherwise create an account using an FIU email.



2. After that you will be on the main page, and you are going to have two options. You can choose either the tutor bot or the code bot.

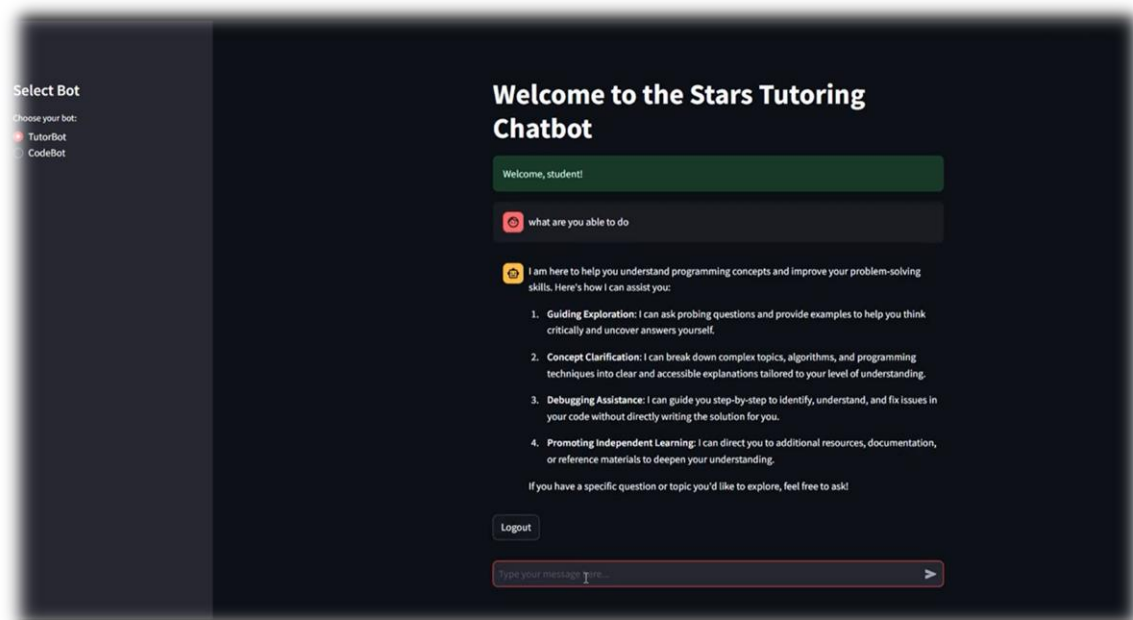


3. For either one you can ask it “what can you do” and it will respond with its main function.
4. After that you can type in all the questions you want, and it will respond to your questions.

4. Key Features

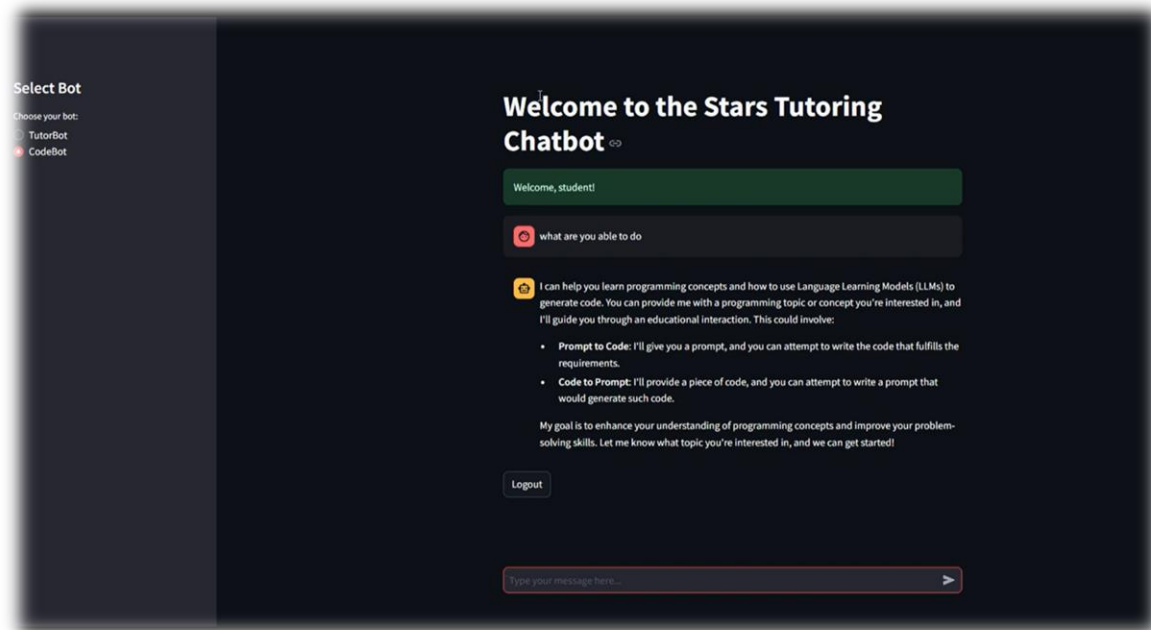
TutorBot

For the tutor bot it is there to teach you. So, it can explain concepts to you if you are not so sure of a topic in one of your computer science classes. If you give code, it will help you break down the concepts and help you debug the code if necessary. It can also ask you questions so you can think figure out the solution to the question in a way that you arrive at the conclusion. That is called Guided Exploration. Also, it can help recommend resources that can further advance your learning. If you ask it to answer a homework question it will not give the answer. Instead, it will try and explain the steps you need to take in order to answer your question.



Chatbot

For the code bot it has two functions it can do code to prompt and prompt to code. For the prompt to code, it will give you a prompt and it will ask you to attempt to write the code for the following prompt. It will try and assist you to help you complete it correctly. For code to prompt it will give you a code and it will ask you to attempt to write a prompt that will generate that code. If you get it wrong, it will tell you what you can improve to get that output.



5. Version History

Stars Tutor Bot 1.0