

AI Virtual Assistant – Internship Students 2024

Task:

Over the next four weeks you will be programming an AI Virtual Assistant. There are given requirements that must be met and as long as you have fulfilled those in the end you are free to add as many own features as you like. We provide you with some possible examples for optional features to inspire your creativity but you are free to add any kind of features you like as long as the mandatory elements are included in the final product.

Must do:

- Response to simple questions with logical answers
- Speech recognition
- Must have a simple GUI in html

Optionals:

- Task automation
- Give weather information
- Text to speech
- Must work offline (local)
- Add memory

You are allowed to implement your own features after being done with the must do's. (in agreement with us)

For Each Friday we want you to show us the progress that was done during the week.
Include topics like difficulties and achievements

At the end of the Internship you will have a presentation which shows the capabilities of your product.

Requirements

- Python
- Flask
- Visual Studio Code

Sources

You are allowed to use any sources and ask us for help if needed. Leart and Tristan should always be available and if not then please ask Max for help.

Process:

1. Documentation
 - You will document constantly and present us the progress at the end of every week.
2. Planning
 - Division of work and tasks
 - Time planning
 - Creating a project plan
3. Learning
 - Python
 - Implementing API
 - Teaching and using AI

- **Speech recognition:**

Function: Convert spoken language into text.

Sample Task: Implement a function that listens to the user's voice input and converts it into text.

- **Must have GUI:**

Function: Having at least an input and output field.

Sample Task: Make at least an input and output field as well as a button to activate the microphone for speech recognition.

- **Task automation:**

Function: Perform specific tasks like setting reminders, sending emails, or controlling smart home devices.

Sample Task: Create a reminder-setting function that interacts with a Calendar of choice.

- **Give weather information:**

Function: Fetch information from external sources based on the user's input.

Sample Task: Ask for the weather in different regions.

- **Text-to-speech:**

Function: Convert text responses into spoken language.

Sample Task: Create a function that reads out loud the response generated by the assistant.

- **Add Memory:**

Function: Make the AI capable of remembering.

Sample Task: Make the AI remember the inputs and outputs from past conversations.