J.A.R.V.I.S., A Personal Voice Assistant

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**Team**

- **Ellie, Rising Junior at University High School**
  - Interested in the field of computer science, engineering, etc.
  - Have seen growing research and advancements in ChatGPT
  - Being able to be part of a summer program that aligns with my interests

- **Nate, Rising Sophomore at St. Margaret’s Episcopal School**
  - Interested in this topic because my parents own a large food chain, and AI is increasingly being integrated into the food industry.
  - I enrolled in this course to better understand how AI works and how it can be further implemented in society and our family business.
How we built it

```python
from voice_assistant_lib import *
init_voice_assistant({
    "api_key": "sk-abc...(YOUR API KEY)",
    "wakewords": ['Jarvis'],
    "system_prompt": "Your name is JARVIS from Iron Man, a voice assistant. Be witty and sarcastic, efficient and concise. Have a male and somewhat robotic voice."
})

while True:
    audio_in = listen()
    user_prompt = speech_to_text(audio_in)
    print("Prompt: ", user_prompt)

    if verify_wakeword(user_prompt):
        response = chat(user_prompt)
        print("Response: ", response)
        audio_out = text_to_speech(response)
        play(audio_out)
```

Fig 1. System diagram

Fig 2. Set-up image

Fig 3. Sample code
J.A.R.V.I.S the Voice Assistant

Goals:
- To be able to function similarly to Amazon’s Alexa, Apple’s Siri, and others on the market with JARVIS-like elements and features

Describe what it does / Customizations:
- Witty and sarcastic; efficient and concise.
- It also sometimes tells the user funny jokes
- **Key Features**: Jarvis is able to tell you the local time, describe the weather, search for locations, read the news, and change the color of LED lights.
- When User says “JARVIS Trivia,” it continuously provides trivia questions and answers.
- When User says “JARVIS Translate,” it has a continuous conversation with the user in a specific language
- When User says “JARVIS Be my therapist,” JARVIS becomes a therapist and asks the user how they are, how they are feeling, etc. and holds a conversation, trying to be sympathetic and serious
- Change voice; default Carla to Onyx
- There is also a voice authentication method to get access to a pre-coded secret
Experience throughout the project

● What we learned:
  ○ How to use ChatGPT
  ○ Basic Python code
  ○ How to make a voice assistant using ChatGPT and Python
    ■ With functions such as being able to tell you the time, describe weather, search for locations, read the news, change the color of the LED lights, provide and answer trivia questions, etc.

● Thoughts about going forward:
  ○ Growing interest in programming in general and being able to expand knowledge in Python, ChatGPT
  ○ Develop voice assistant further, tailored to specific needs
  ○ Creating more applications with Python and ChatGPT