GitHub: <https://github.com/dthung99/Move_The_Circle_LLM_Game>

How the NLP integration worked:

* I utilized the OpenAI API.
* Flow of logic:

1. The user speaks into the microphone.
2. The audio is sent to the OpenAI API for transcription into text.
3. The transcribed text is sent to the OpenAI API to identify the action based on the context.
4. The system executes the corresponding action based on the LLM's output.

Challenges:

* I initially intended to use a local model or train my own. However, I discovered that this approach would require significant time and data, especially since I lack experience in NLP. Transfer learning was also not a viable option for me, so I opted for prompt engineering instead.

Potential improvements:

* The current response time is slow because I used two NLP models (speech-to-text and LLM). With more resources, we could distillate these into a single model for quicker responses.
* More complex prompts could be utilized to allow LLM to follow more intricate instructions.
* I developed the project in a rush, which means many parts of the code are not optimized.
* Gameplay enhancements include improving graphics and potentially adding projectiles for users to dodge.