Narrative Quest Generation

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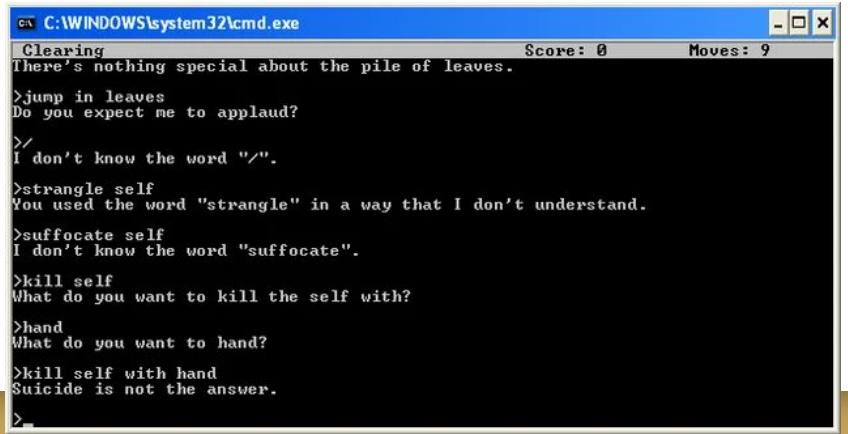
Project Introduction - Narrative Quest Generation

- Inspired by classics like Zork and modern AI games like AI Dungeon, we want to build a text-based adventure game powered by machine learning
- Our goal is to create a console based game where the player can explore and interact through a dynamic and unique story
- Our application will be able to respond to various inputs from the user, and not be limited in their word choice, like the game Zork



How it will work

We want to keep track of what has happened in the past, because previous actions can have a large impact on the story

1. Player input - The user will type a command like ‘Pick up the lantern’
2. Intent extraction - Using sentence transformers, we can extract meaning of the player input. What action is the user taking? WHat object or direction is involved?
3. Context embedding and retrieval - Each turn, we embed and query our vector database to retrieve the most relevant past events
4. Story generation - Use a language model and retrieved context to generate a response and make a dynamic story

What will be the challenge?

- We will be combining multiple machine learning concepts together (transformers, embedding models and vector databases, language models)
- We will need to experiment with ways to track inventory, environment objects, and player intent
    - We can potentially use embeddings and transformers for these
- Potentially fine-tuning or finding a fine-tuned language model