Project 41: AI Dungeon Master (Text Adventure Game)

Description:

This project turns the AI into a Dungeon Master for a fantasy-style text adventure game. You describe your actions, and the AI narrates the unfolding story. Great for roleplaying, storytelling, or just having fun with interactive fiction!

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ai_dungeon_master.py

```python
import openai
import os
import gradio as gr

# Load the OpenAI API key from environment variable
openai.api_key = os.getenv("OPENAI_API_KEY")

# Initialize story context to remember the previous adventure log
conversation_history = [
    {
        "role": "system",
        "content": (
            "You are a creative and immersive Dungeon Master. Guide the player
            "Allow them to explore, battle, and make choices. Always respond i
            "'What would you like to do next?'"
        )
    }
]

# Function to interact with the AI Dungeon Master
def dungeon_master(player_action):
    # Add user input to the conversation history
    conversation_history.append({"role": "user", "content": player_action})

    try:
        # Call OpenAI to generate the next part of the adventure
        response = openai.ChatCompletion.create(
            model="gpt-3.5-turbo",  # GPT-4 optional for deeper RPG logic
            messages=conversation_history
```

```python
        )

        # Get assistant reply and store it
        reply = response["choices"][0]["message"]["content"].strip()
        conversation_history.append({"role": "assistant", "content": reply})

        # Return the next piece of the story
        return reply

    except Exception as e:
        return f"Error: {str(e)}"

# Gradio interface for the AI Dungeon Master
iface = gr.Interface(
    fn=dungeon_master,
    inputs=gr.Textbox(lines=2, placeholder="e.g. I open the treasure chest cau
    outputs="text",
    title="🎮 AI Dungeon Master",
    description="Start a fantasy text adventure! Type your actions and let the
)

# Launch the game
iface.launch()
```