

# Dungeon and Dragons AI Agent

## Game Play Instructions

**The following must be done prior to running the game.**

API Keys in your .env file:

- OPEN\_API\_KEY
- STABILITY\_API\_KEY

JSON files in the same folder as your program:

- npc.json
- characters.json

The following packages must be installed into your python install or virtual environment:

- dotenv
- openai
- langchain\_community
- langchain\_openai
- matplotlib
- networkx
- numpy
- pyaudio
- difflib
- pil
- requests
- base64

The following is a transcript of actions from the video:

AI output is shown in blue

User input from the video is shown in purple

### **Start**

1. Run aichat() —> main  
Choose no to TTS and load game

### **Prompt:**

Hello! Welcome to the AI Dungeon Master

Please be aware: you are listening to an artificial voice if you decide to use text-to-speech  
(legal/ethics choice)

World Node Map Visual

## World Building

2. AI will ask for character information as an input from user as follows and enter:
  - a. What name would you like to choose?  
allie
  - b. What character would you like to be? Your options are:['fighter','rogue','mage']  
fighter
3. AI will ask:
  - a. What would you like to do?  
Go to the Dungeon. Can you show me an image of it?  
Prompt:  
Dungeon Image Generation  
You find yourself standing in the bustling Village Center, ...  
What do you wish to do? Would you like to head to the Dungeon, or  
explore another location first?

## Dungeon Maps and Interactions

4. Head into the Dungeon  
Prompt:  
Grid Created Dungeon Map  
As you make your way to the Dungeon, ...  
You have entered the Dungeon!  
## Dungeon Rooms:  
\*\*R1: The very first room, . . .  
You can move north to R2.  
State has been updated.
4. Look around R1. What is in the room?  
Prompt:  
As you look around the dimly lit room, ...  
\*\*Room R1 Description\*\*  
.....  
The room has no other notable interactables at this time.  
State has been updated.
5. Go into room 2  
Prompt:  
As you decide to venture deeper into the dungeon, ...  
\*\*Room R2 Description\*\*  
.....  
### Dungeon Update:  
You have successfully entered room R2. Room R1 has now been logged as  
visited.  
What would you like to do next?

## Returning Area State Persistence

6. Go back to the Village Center  
Prompt:

The Village Center is bustling with activity, ...

Your previous exploration of the dungeon has been noted, and you have now officially visited rooms R1 and R2 of the dungeon.

7. Look around. Can you show me a picture of the village center?

Prompt:

Village Image Generation

As you take in your surroundings,

8. Who can I talk to?

Prompt:

As you stand in the Village Center, ...

1. \*\*Merchant\*\*: ....

2. \*\*Guard\*\*: ....

3. \*\*Old Woman\*\*: ...

Who would you like to talk to? ...

9. Go into R1 of the Dungeon?

Prompt:

Grid Created Dungeon Map

**Fight, Fight, Fight**

9. Look around for an enemy?

Prompt:

As you scan your surroundings, . . . a chill runs down your spine....

The air feels changed as you prepare for what's sure to be a fierce encounter.

Grid Created Dungeon Map

10. Can you show me an image of the orc warrior?

Prompt:

Generated image of orc warrior

You find yourself...

What do you wish to do? You can prepare for combat, ...

Grid Created Dungeon Map

11. Let the orc warrior attack me.

Prompt:

Current health is now: 88.0

As you stand in the dimly lit room R2....

What do you do?....

Grid Created Dungeon Map

12. Let the Orc attack me again

Prompt:

As you brace yourself for the Orc Warrior's next attack, . . .

The Orc Warrior attacks!

\*\*Attack Power\*\*: 7

Rolling for the attack:

...

\*Rolling...

The roll is a 4.  
You take damage!  
\*\*Current Health\*\*: 88-0 - 7 - 81.0  
What would you like to do next?  
Grid Created Dungeon Map

13. **Attack the orc warrior**

Prompt:  
You charge towards the Orc Warrior, ...  
Rolling a 10-sided die for your attack...  
  
\*\*Damage Calculated:\*\*  
Your attack power is 15, and you strike the Orc Warrior.  
...  
\*Orc Warrior Health Update:\*\*  
Health reduces from 30 to 15.  
What do you like to do next?  
Grid Created Dungeon Map

14. **Attack the orc warrior again.**

Shows that the orc is killed and health goes to 0  
Obtain Items: Get orc axe and leather armor

**Saving and loading a save state**

15. Load new instance of game with aichat()  
Choose no TTS or load game  
Village Node Map Pops Up

16. **Go to tavern**

Prompt:  
As you settle in, you notice a board with various quests. . .

17. **exit**

18. Load new instance of game with aichat()  
Choose no TTS  
Load .JSON  
Village Node Map Pops Up

19. **Where am I at?**

You find yourself in the Tavern, ...

**Text to Speech**

15. Load new instance of game with aichat()  
Choose yes to TTS or an no to load game  
Village Node Map Pops Up  
AI's description  
TTS voices AI description