🌎GPTWorld: an experimental multi-agent sandbox world.

🌎 GPTWorld is an experimental multi-agent sandbox world. 🔬 Unlike typical sandbox games, interactions in GPTWorld are not defined by pre-written scripts 📜 , but rather **inferred by a world engine based on large models 🤖 .**. In this world, virtual agents and objects are equipped with long term memory, they can act, react, and communicate with each other, all supported by AI 🤯 .

Creating a sandbox world is typically thought to need a bunch of game developing techiniques, which are out of reach for most people. That what 🌎 GPTWorld comes to rescue! 🛠️ To facilitate the creation of a more diverse range of sandboxes, we aim to allow players to create custom worlds through simple configuration files or even natural language 🤩 ,

By enabling easy to grab `world creation` ability, we look forward to everyone to build their own interesting world, and eventually gathered into a rich sandbox world for intelligent agents to explore through community sharing 🤝 .

👷 👷‍♀️ Join us on this exciting journey of creating a groundbreaking sandbox world with limitless possibilities 🚀 !

Currently, 🌍 GPTWorld supports:

👷 Easily creating your environment and entities using JSON and mounting them onto your world 🏃 Starting the environment's autonomous operation with just one command 👀 Observing the behavior of the agent in your web browser

Experimental feature 🗣️ Creating environments with natural languages

🎉 **TODOS!** 🤝 Allowing players to build and share environments in a distributed way

🙏 **Acknowledgements:** This project was greatly inspired by *Generative Agents: Interactive Simulacra of Human Behavior* during development, where the mechanism of agents' behavior takes the reflection-summary-plan framework.

🚨 **Disclaimer:** This project is for academic and experimental purposes only. We currently suspect that it is far from a usable game product.

Usage

Install

It is suggested to use `python=3.8` on all platforms.

1. Download project by

```
git clone https://github.com/ShengdingHu/GPT-World.git
```

or download zip file and unzip it.

2. (Optional) Create a python virtual enviornment by

```
conda create -n gptworld python=3.8
```

- Note that python3.8 support websockiet the best, other python versions may encounter issues in web display currently. *

3. Go to project directory by

```
cd GPT-World
```

4. Install dependencies by

```
pip install -r requirements.txt
```

5. Then install this library by

```
pip install .
```

6. Build the front end

```
cd io/frontend_new/rpg-game/
npm run build
```

Run examples

We currently provide some example sandboxes in `world_instances/`, choose one that you want to launch. Take `alice_home` as an example.

1. start the world engine

```
python gptworld/run.py -W alice_home
```

2. start the web server

```
python io/app.py -W alice_home
```

now open the 5001 port of your localhost, and you will be able to see a simple environment.

(🧪 Experimental) Create your own

1. If you want to create your world instance, modify the requirement in `gptworld/create_world.py` and run

```
python gptworld/create_world.py
```

Global Configs

```
export GPTWORLD_LOG_LEVEL=XXX # (XXX can be debug, info, warning ...) to set the logging level
```

Star History