Recruitment requirements

Project Overview

Our project focuses on developing a new type of **interactive narrative game that leverages AI** to create dynamic, evolving stories. Unlike traditional games that rely on fixed, pre-written scripts, our game allows the story to change based on the player's actions, creating a more immersive experience where the narrative is shaped in real time by both the player and the game world.

The game uses a three-layer system:

World State Manager (Base Layer): This is the core of the game, where the world’ s events, characters, and timeline are managed. It ensures that everything makes sense and is logically consistent as the story progresses.

Game Environment (Middle Layer): This is where players interact with the world. It features AI-driven NPCs (non-playable characters) that not only respond to players but also interact with each other. These NPCs help drive the story forward, creating a rich, social environment where the actions of one character can influence the entire narrative.

Player Interaction (Top Layer): The player actively participates in shaping the narrative by making decisions that impact the world and characters. The game adjusts dynamically to the player's choices, providing a more personalized and engaging experience than traditional games.

Most games have a fixed or branching story where you choose from set options. In our game, the story evolves naturally based on the player's actions. It blends traditional storytelling with AI-powered flexibility, where NPCs work together and interact in ways that push the story forward. This creates a dynamic world that responds to the player, making the characters feel alive—they remember past events, build relationships, and adapt to changes.

The challenge is to balance the narrative control (so the story remains coherent) with the creative freedom provided by AI, making sure the player’ s experience is both rich and engaging while maintaining the core narrative.

Our Expectations for Participants

We prioritize intrinsic motivation, passion, and the ability to learn independently over existing technical expertise. We’ re looking for individuals who are eager to contribute, open to exploration, and committed to growth within the project

How We Evaluate Participants

Presentation Requirements for Game Design

When participating in the game design aspect of our project, it's essential to understand that we are building around LLM and multi-agent systems, which means our game will be narrative-driven. Therefore, in addition to traditional game design skills, we are particularly looking for candidates with some writing and storytelling abilities, such as:

- Knowledge of branching storylines, player choice mechanics, and nonlinear storytelling techniques in games.
- Experience in creating compelling characters, engaging dialogue, and dynamic story arcs.
- Experience writing for games, interactive media, or other storytelling formats （a significant plus）.

However, that's perfectly fine if you don't have experience in these areas. Before joining, we encourage you to explore the differences between game narrative and narrative in other media formats.

Recommended Reading:

Cybertext: Perspectives on Ergodic Literature by Espen J. Aarseth.

Although the game design aspect doesn't involve particularly hardcore technical development, it's still important for us to acquire some relevant knowledge to effectively communicate and collaborate with the team members responsible for technical tasks. At the very least, you need to understand what AI agents are capable of.

The participants should prepare a 15-minute presentation, with 5 minutes allocated for Q&A. The content may include, but is not limited to, the following:

1. **Learning skills**: Discuss key concepts, frameworks, and skills you learned.
2. **Challenges and Solutions**: Share difficulties encountered during the project (technical, creative, or management challenges) and how you addressed them.
3. **Please share your thoughts on the key issues we are focusing on：**
    a. What are the shortcomings of existing games based on generative AI? What can make our game stand out from other games based on generative AI?
    b. In what ways can generative AI enhance the narrative aspects of games, and how?
    c. How can we balance the creativity of LLM-generated content with the originality of scripts written by game creators, ensuring that the innovative elements set by the creators are not overlooked while allowing the LLM to maximize its generative potential?

    d. Some possible gameplay for our game.
4. **Demo presentation (Optional)**: Show a simple demo or prototype, like:
    a. An linear story or multi-path narrative （With or without gen-AI）
    b. A game prototype related to our project (eg. You might consider integrating some LLMs into the game engine and designing gameplay around them.）
5. **Game Design Experience (Optional)** : Share examples of your previous game design work, particularly if it is narrative driven or including gen-AI.
6. **Language Choice**: English

Presentation Requirements for AI Agent:

Participants should prepare a 15 minute presentation and 5 minutes for Q&A. The content may include, but is not limited to:

1. **Learning skills:** Key takeaways from Papers and Videos
2. **AI Development experiences:** Familiar with LLMs, basic machine learning tools, transformer structure, etc.
3. **Research skills:** What is the most challenging problem you have met during these weeks, and how did you solve that?
4. **Please share your thoughts on the key issues we are focusing on.** (You can select 1-2 of the following to discuss during your presentation.)

    Key Issues:

    a. How can we balance the creativity of LLM-generated content with the originality of scripts written by game creators, ensuring that the innovative elements set by the creators are not overlooked while allowing the LLM to maximize its generative potential?
    b. How to evaluate the agents' work for game generation? Use agents to evaluate them or do you have other solutions? If so, please explain how to use agent for evaluation.
    c. In most games, both agents and players operate within a predefined action space, allowing players to select from a set of prepared actions that determine the game's state. However, this design can lead to monotonous gameplay. For AI agents, a challenge arises when a player attempts to perform an action outside the predefined action space—how should the system handle such scenarios?
5. **Demo presentation (optional):** Present with some demos you have run and explain how are they related with our project
6. **Game development experience (optional):** If you have any game development experience, please show detailed work

Language Choice: English

Resource

General

https://mark-riedl.medium.com/an-introduction-to-ai-story-generation-7f99a450f615 - An Introduction to AI Story Generation

Game Design

- Video
  - https://www.youtube.com/watch?v=G8AT01tuyrk&list=PLPV2KyIb3jR5kPzHBi90byfhPfPqaDW9s&index=1 - A series of basic introductions about game design, including basic principles, difficulties, storytelling, etc.
  - https://www.youtube.com/watch?v=iIOIT3dCy5w - How To Think Like A Game Designer.
- Paper & Blog
  - https://i7-examples.github.io/Glass/Overview.html - A very helpful blog about a narrative design example.
  - https://cdn.aaai.org/Workshops/2004/WS-04-04/WS04-04-001.pdf - MDA: A Formal Approach to Game Design and Game Research
  - https://link.springer.com/chapter/10.1007/978-3-030-62516-0_13 - GFI: A Formal Approach to Narrative Design and Game Research
  - link.springer.com - Detailed discussions on narrative design, video game storytelling, navigation artificial intelligence, and discussions on several hot game genres such as NFTs and VR.）
- Demo
  - https://github.com/latitudegames/AIDungeon - AI Dungeon is an AI-powered interactive storytelling game that demonstrates how to use AI-generated content to create an open-world narrative experience, serving as a reference for balancing player freedom and AI coordination.
  - https://i7-examples.github.io/Glass/ - code of the game Glass
  - https://www.imdb.com/title/tt14897636/faq/ - A cool game , try it

AI Agent

- Video

    - https://www.youtube.com/watch?v=F8NKVhkZZWI - A soft intro to the field of AI agents.
- Paper
    - https://arxiv.org/abs/2310.08560 - MemGPT (Letta) - A great example to understand agent design (in practice)
    - https://arxiv.org/abs/2308.00352 - MetaGPT - One of the most classic works in multi-agent systems
    - https://ojs.aaai.org/index.php/AIIDE/article/view/27539 - Paper for the game 1001 Nights - Focus on prompting the agents
    - https://arxiv.org/abs/2310.14985 - Avalon Gameplay - One of the game agent framework work
    - https://arxiv.org/pdf/2308.08155 - Autogen - A popular framwork for agentic AI made by Microsoft
- Demo
    - https://github.com/3DAgentWorld/LLM-Game-Agent - Demo for Avalon Gameplay
    - https://github.com/microsoft/autogen - Autogen - A popular framwork for agentic AI made by Microsoft
- Code
    - https://github.com/git-disl/awesome-LLM-game-agent-papers?tab=readme-ov-file#simulation-games - A survey for LLM-based game agents