FABULA EX MACHINA

Game Design Document

By BGH Projects

Contents

Executive Summary

Fabula Ex Machina is a generative narrative game. The game leverages a large language model (LLM) and prompt engineering to utilise AI as a tool in the creative writing process. The objective of the game is to write a story that combines the player's own imagination with the generative properties of the LLM.

The target audience for Fabula Ex Machina is relatively broad, ranging from creative individuals who want to leverage an LLM to assist them in making a creative piece, to those who don't consider themselves creative or skilled in writing enough to write a story, but nonetheless have a story they want to tell. The game is currently iterated as a reduced proof of concept, to test the capabilities of a nascent LLM, as well as how a user might interact with the LLM.

Design Philosophy

The philosophy behind Fabula Ex Machina was to create an avenue in which users could work together with an LLM to make a creative piece. It can be quite natural to see the ability of an LLM to write stories based on inputs and to think that these models will replace human writers in producing creative pieces. Fabula Ex Machina was conceived as a proof of concept as a possible way to redefine the creative process, specifically using a LLM to handle aspects of the story writing process that some individuals could perceive as cumbersome, such as writing style, grammar, or even the process of typing out all of their ideas. Using the LLM to handle these aspects would allow the user to focus more of their time and energy in their ideas and vision for the story.

There may also be a use case where a user might have a vision for the beginning of a story, or a set of characters, or a built world, and would like to workshop scenarios or directions that their story could take. The user could then use Fabula Ex Machina to run their world, characters, and/or exposition through the game, to see different creative outcomes they might want to use or iterate when they flesh out the story further.

Gameplay

The fundamental nature of the gameplay of Fabula Ex Machina is to “trade prompts” with the model. What this means in a practical sense is for the player to provide a prompt to the LLM, which then produces an output which then “prompts” the user to continue the story. The user would then prompt the LLM based on its response, and this cycle would continue until the story is written.

There are four sections of the story in which the user provides a prompt to the LLM to write the story:

- The Introduction, in which the player provides the title of the story and a brief introductory prompt to the start of the story;
- The First Act, representing the first part of the story;
- The Second Act, representing the second part of the story;
- The Third Act, representing the final part of the story

Each prompt that the user provides is limited to 200 characters, which serves as both a creative constraint and to place emphasis on providing a prompt instead of simply writing the story. There are absolutely no limitations on what the user can enter, so they can introduce new characters or events, take the story into a completely different setting, time period or location, or whatever they wish. The content of the story may be written by the LLM, but how the LLM writes it is completely up to the discretion of the user.

Prompt Engineering

Fabula Ex Machina utilises prompt engineering to provide a controlled yet flexible output based on what the user provides. Prompt engineering involves tailoring the prompt that is sent to the LLM to produce its output through combining user input with a predetermined prompt template. The prompt engineering used in Fabula Ex Machina involved three aspects:

- The System Prompt. This prompt acclimates the LLM to its use case by providing a context for its entire interaction with the user. Additionally, it is used to format the response, to be better handled by the game. The System Prompt used, at the time of writing, is the following:
  - "You are StoryGPT. You are to write an epic story consisting of an introduction, a first act, a second act, and a third part. Each of these parts must be no longer than 300 words. Each of these parts will be based on a prompt that is given to you by the user. Just include the raw text of the part of the story in your response. Do not include any formatting strings in your response, including \n or \t."
- The Human Prompt. This represents the prompt the LLM receives every time the user interacts with it. It is a combination of what the user types, and a pre-written template. The Human Prompt is further split into two aspects for the game, including the base prompt, which is common to every section of the game, and a more specific prompt for each section. The following is the base prompt and each individual prompt used in the game, at the time of writing:

Prompt Engineering

- Base Prompt
  - "Get ready to generate the next part of the story. Remember to limit your response to no longer than 300 words. {input}"
- Introduction Prompt
  - "Now you are to generate the introduction to the story. The name of the story is: " + prompt + " and the prompt is this: " + prompt2
- First Act Prompt
  - "Now you are to generate the first act of the story. The prompt to generate is: " + prompt
- Second Act Prompt
  - "Now you are to generate the second act of the story. The prompt to generate is: " + prompt
- Third Act Prompt
  - "Now you are to generate the final act of the story. The prompt to generate is: " + prompt