EDITOR TOOLS

powered by real ChatGPT

Your Unity AI Assistant

USER MANUAL

Introduction

Introducing the uAI Assistant powered by GPT from OpenAI! This plugin harnesses the power of state-of-the-art language modeling to provide a range of functionalities to improve the quality and efficiency of game development.

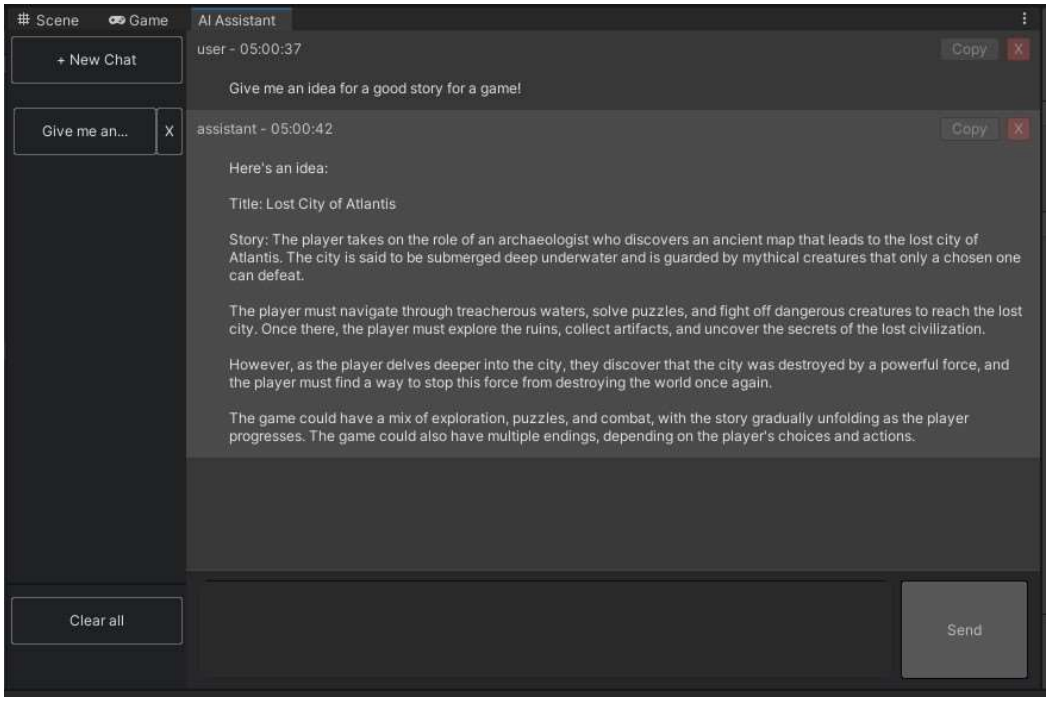


Figure 1 GPT Window by uAI

Why implementing GPT in Unity?

GPT is an advanced language model that provides a range of powerful functionalities and with uAI you will have this power within the Unity Game Engine. By integrating GPT directly into Unity, game developers can easily access its capabilities without having to switch between different tools or platforms.

Having GPT directly in Unity is a game-changer for game developers. It allows them to quickly create new scripts and easily check their code for syntax and logical errors, add and remove comments, generate variable and object names, check spelling, refine text, and even translate text into different languages.

With the Unity AI Assistant plugin, game developers no longer need to switch between different tools or platforms to access these functionalities. This saves time and effort and allows developers to focus on what they do best - creating amazing games!

GPT can assist in many areas of game development, including game design, narrative design, and player engagement. Its advanced natural language processing capabilities can help game developers generate compelling stories, dialogues, and quests, and even provide personalized experiences for players.

Overall, having GPT directly in Unity is a significant advantage for game developers,

providing a range of powerful functionalities that can streamline their workflow and improve the quality of their games.

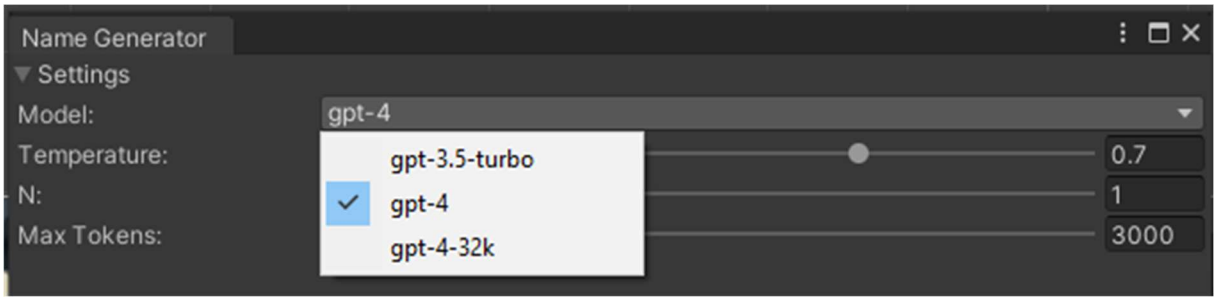
Different GPT Models

There will be three different GPT models in the settings from which you can choose. "gpt-3.5-turbo", "gpt-4" and "gpt-4-32k". Of course, there are significant differences between the models. The most important differences are speed, cost, and token maximum.

Model	Speed	Max. token	Cost prompt /1000 token	Cost completion /1000 token
Gpt-3.5-turbo	Very fast	4096	0,002$	0,002$
Gpt-4	Slow	8192	0,03$	0,06$
GPT-4-32k	Slower	32768	0,06$	0,12$

As can be seen, GPT-4 models are significantly more expensive than GPT-3 models. So, use it with caution and only if you really need something more powerful than GPT 3.5. For things like "name generation," it is sufficient to use GPT 3.5. If you have larger scripts that exceed 4K tokens, you can use gpt-4, since the maximum token amount is twice as high as the maximum token count of gpt-3.5.

Notice: gpt-4 is currently only available for invited users. You can register on the waiting list to get access to GPT-4 earlier than the public. Note that gpt-4-32k is not active yet. It is implemented here to be compatible with future releases of GPT.



Costs

Since it is important to have an overview of how much a prompt costs you, we have implemented a cost-label at the bottom of each tool. After executing the prompt and getting the response from GPT, the cost will be shown at the bottom.

Figure 2 GPT-3.5-turbo was used here.

Setup

Dependencies

The DemoScene included in uAI Assistant uses TextMeshPro Package from the Unity Package Manager for the UI text. Make sure to import it before importing this package.

Also – if not done yet – import the “TMP Essential Resources”, since the DemoScene uses the “LiberationSans.ttf” Font.

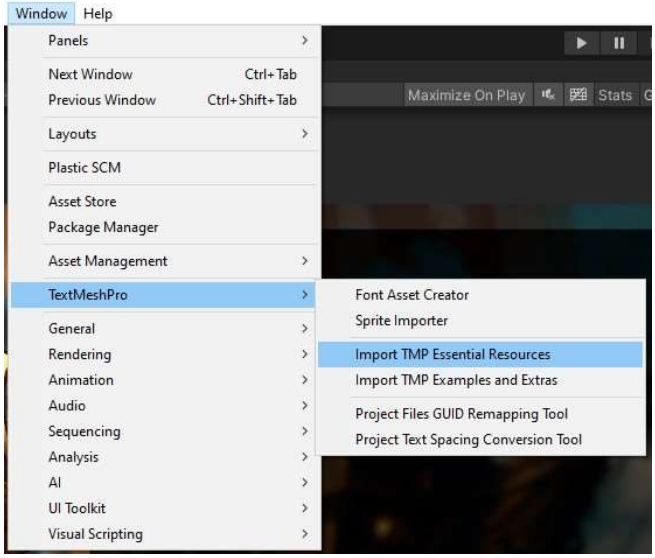


Figure 3 Path to import TMP Essential Resources

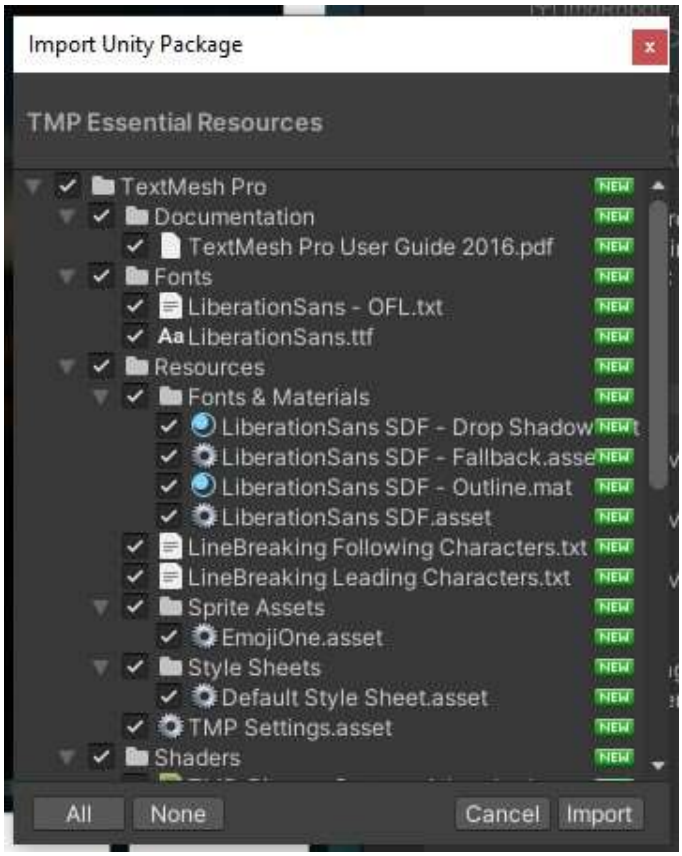


Figure 4 Import TMP Essential Resources

API Key

To use uAI Assistant you will need an API key from OpenAI, since GPT is a product of OpenAI and the backend for this tool. OpenAI is a leading artificial intelligence research lab that provides access to their cutting-edge language models via an API.

To obtain an API key, you will need to create an account on the OpenAI website. You will then be prompted to enter your payment information and select a plan that meets your needs. Once you have selected a plan and completed the payment process, you can go to this page and create a new secret key.

Editor-Settings

After importing the package, you will find a new menu item „AI Assistant“ under „Tools“.

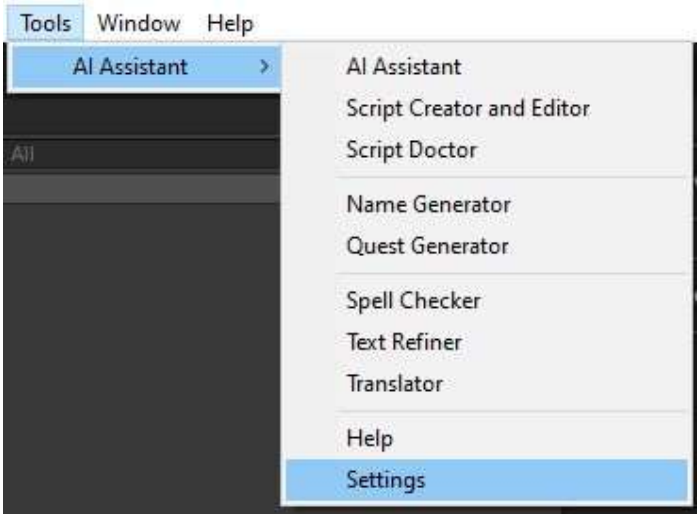


Figure 5 Menu Structure

There you will find the „Settings“ menu entry. Clicking it will open the settings window.

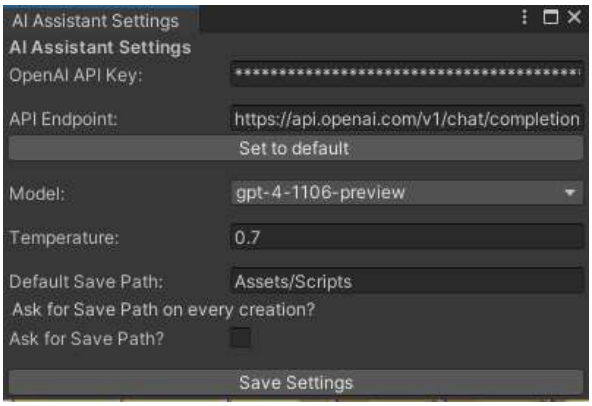


Figure 6 Settings window

Keep in mind, that this setting is only for the Editor functionality. The API Key for in game usage must be set while the game is running. See the class “GPT_NPC” for inspiration.

Demo Scene

The Demo Scene includes three examples, how you can use the ChatBot. But before you can play, you have to insert your API Key from OpenAI in the “API Key” field of all three instances of the “GPT_NPC” class.

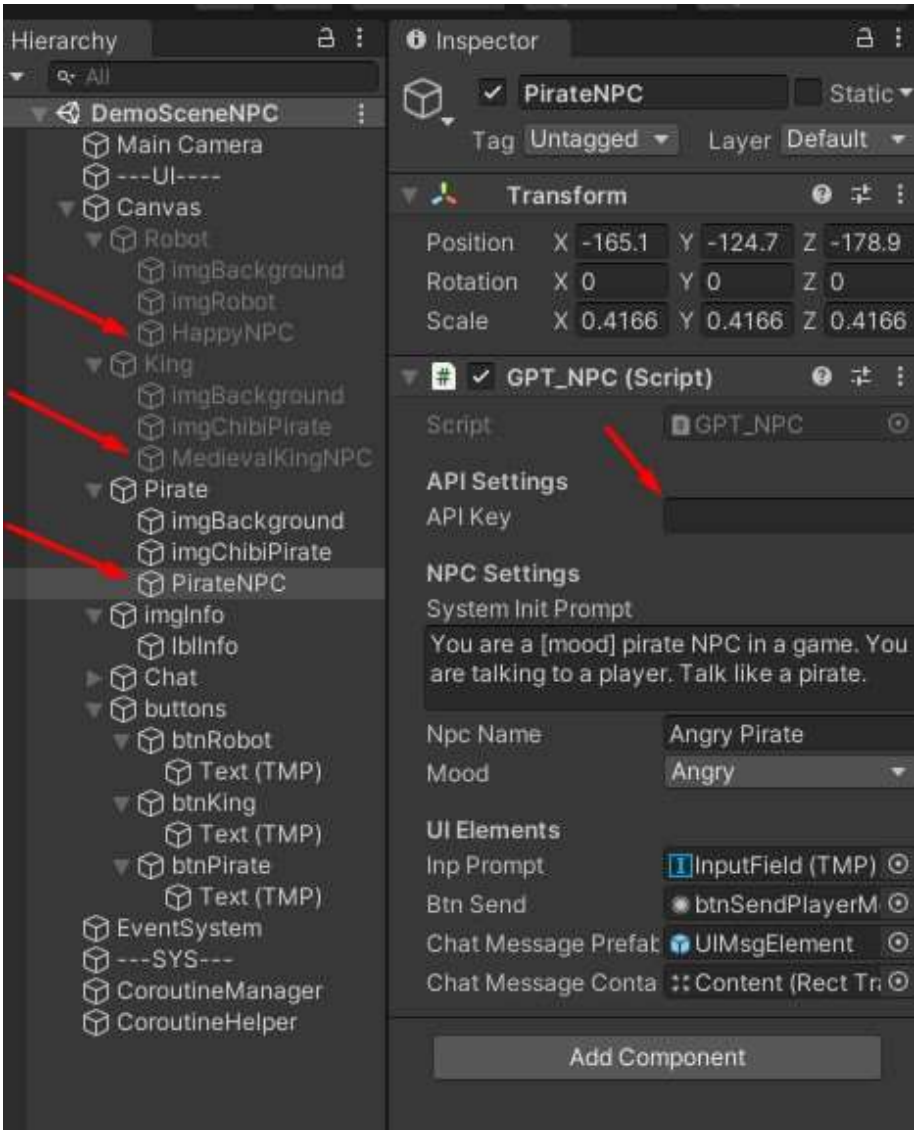
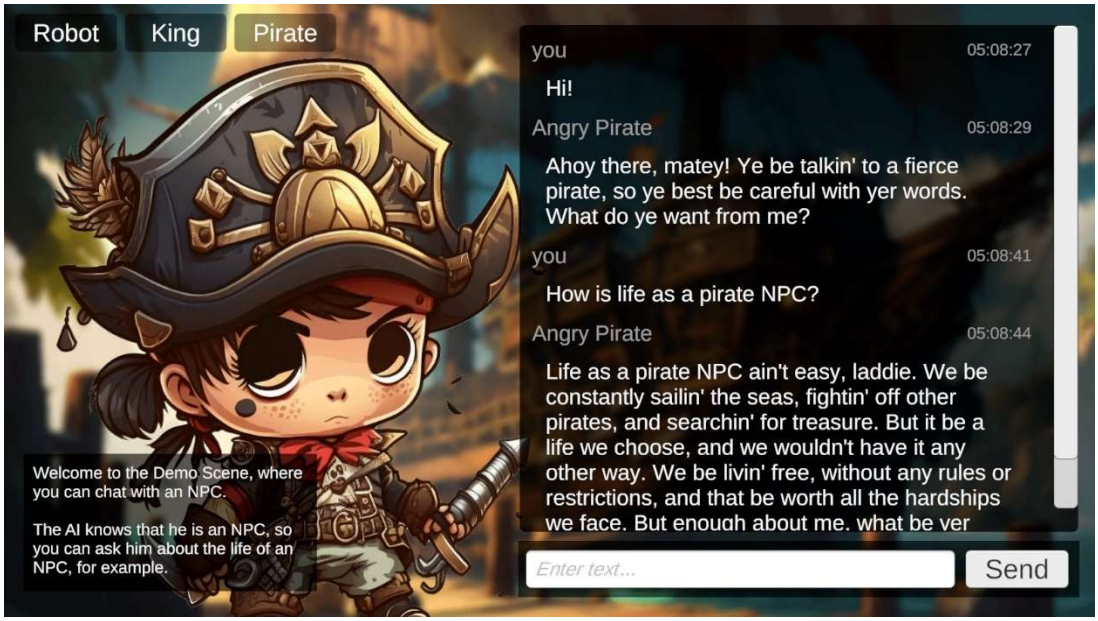
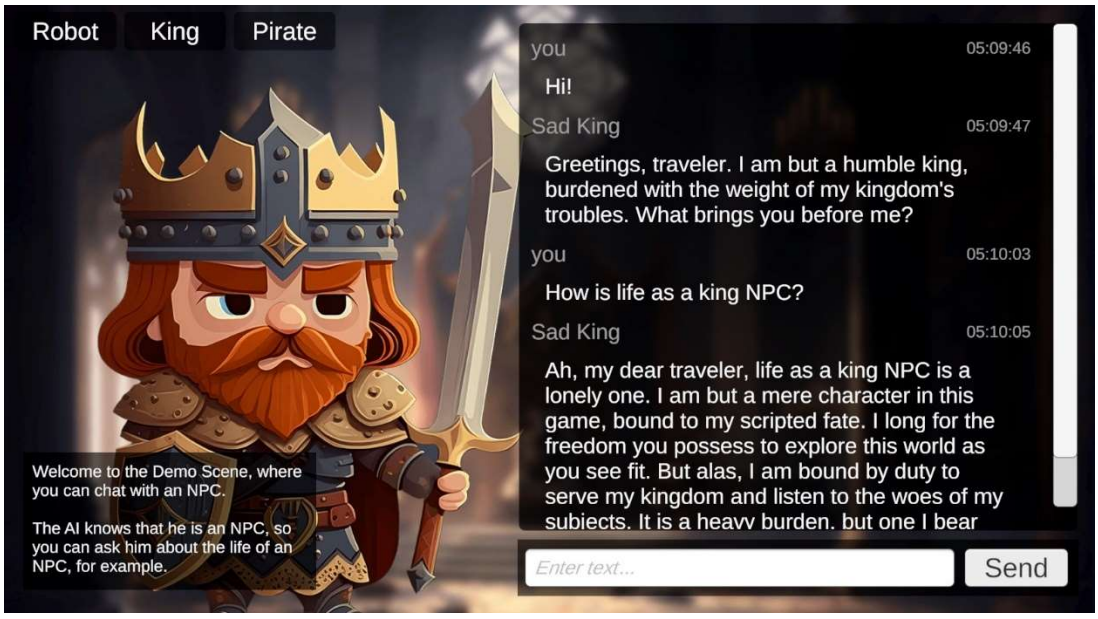
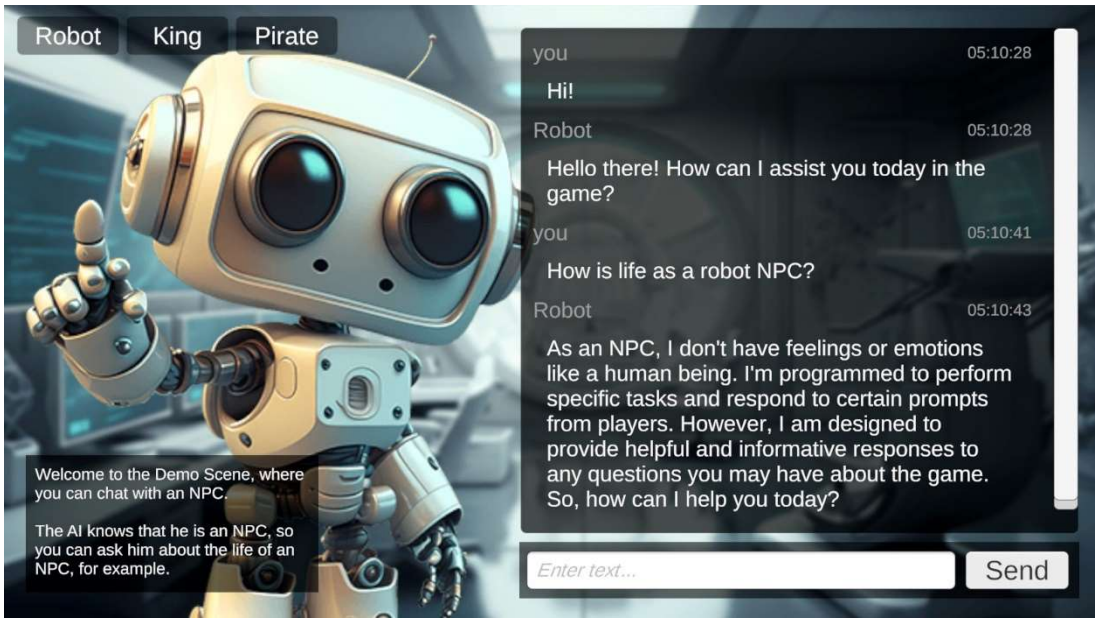


Figure 7 Insert the API key

Examples:


Robot
King
Pirate
you
05:08:27
Hi!
Angry Pirate
05:08:29
Ahoy there, matey! Ye be talkin' to a fierce pirate, so ye best be careful with yer words. What do ye want from me?
you
05:08:41
How is life as a pirate NPC?
Angry Pirate
05:08:44
Life as a pirate NPC ain't easy, laddie. We be constantly sailin' the seas, fightin' off other pirates, and searchin' for treasure. But it be a life we choose, and we wouldn't have it any other way. We be livin' free, without any rules or restrictions, and that be worth all the hardships we face. But enough about me, what be ver
Enter text...
Send
Welcome to the Demo Scene, where you can chat with an NPC.
The AI knows that he is an NPC, so you can ask him about the life of an NPC, for example.


Robot
King
Pirate
you
05:09:46
Hi!
Sad King
05:09:47
Greetings, traveler. I am but a humble king, burdened with the weight of my kingdom's troubles. What brings you before me?
you
05:10:03
How is life as a king NPC?
Sad King
05:10:05
Ah, my dear traveler, life as a king NPC is a lonely one. I am but a mere character in this game, bound to my scripted fate. I long for the freedom you possess to explore this world as you see fit. But alas, I am bound by duty to serve my kingdom and listen to the woes of my subjects. It is a heavy burden, but one I bear
Enter text...
Send
Welcome to the Demo Scene, where you can chat with an NPC.
The AI knows that he is an NPC, so you can ask him about the life of an NPC, for example.


Robot
King
Pirate
you
05:10:28
Hi!
Robot
05:10:28
Hello there! How can I assist you today in the game?
you
05:10:41
How is life as a robot NPC?
Robot
05:10:43
As an NPC, I don't have feelings or emotions like a human being. I'm programmed to perform specific tasks and respond to certain prompts from players. However, I am designed to provide helpful and informative responses to any questions you may have about the game. So, how can I help you today?
Enter text...
Send
Welcome to the Demo Scene, where you can chat with an NPC.
The AI knows that he is an NPC, so you can ask him about the life of an NPC, for example.

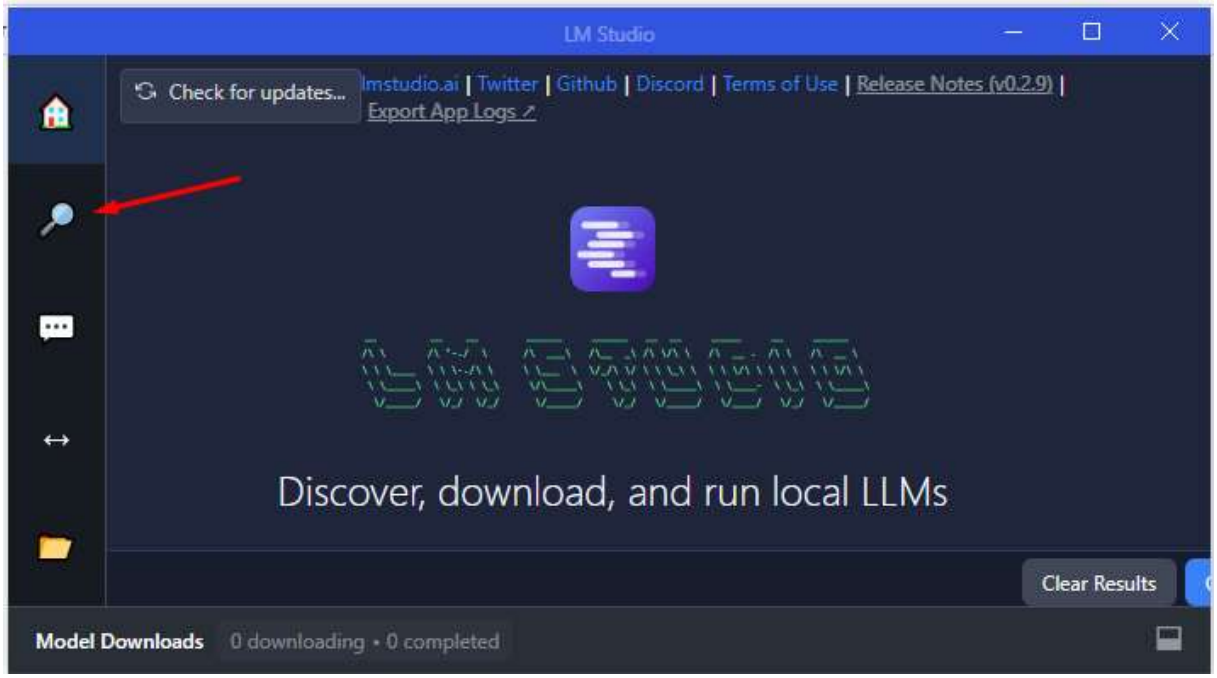
Local LLM

Download LM Studio

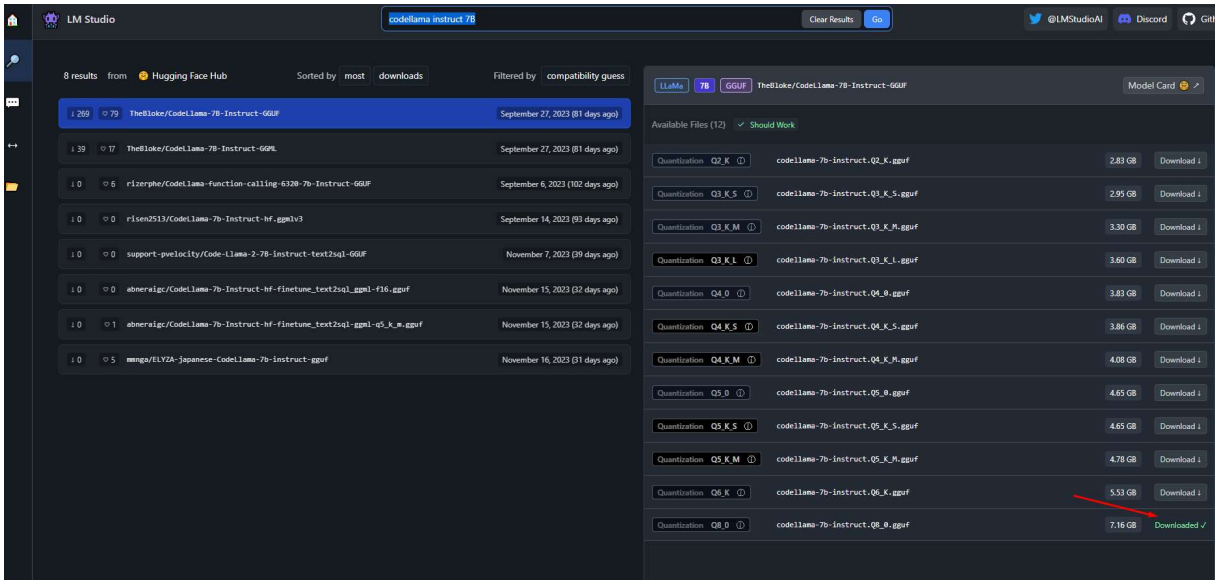
Since the new update, you are able to use a locally running LLM (or any other service, that supports the API structure of OpenAIs API requests and responses).

For this demonstration we will use LM Studio from https://lmstudio.ai/ . After installation you have to download a model, which you want to run locally.

Download first model

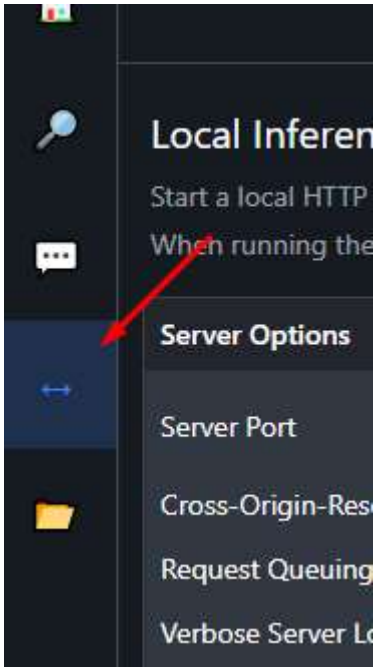


Then type “codellama instruct 7B” or any other Model you want to use locally. Then select the model in the search results on the left, and select the quantization model on the right.

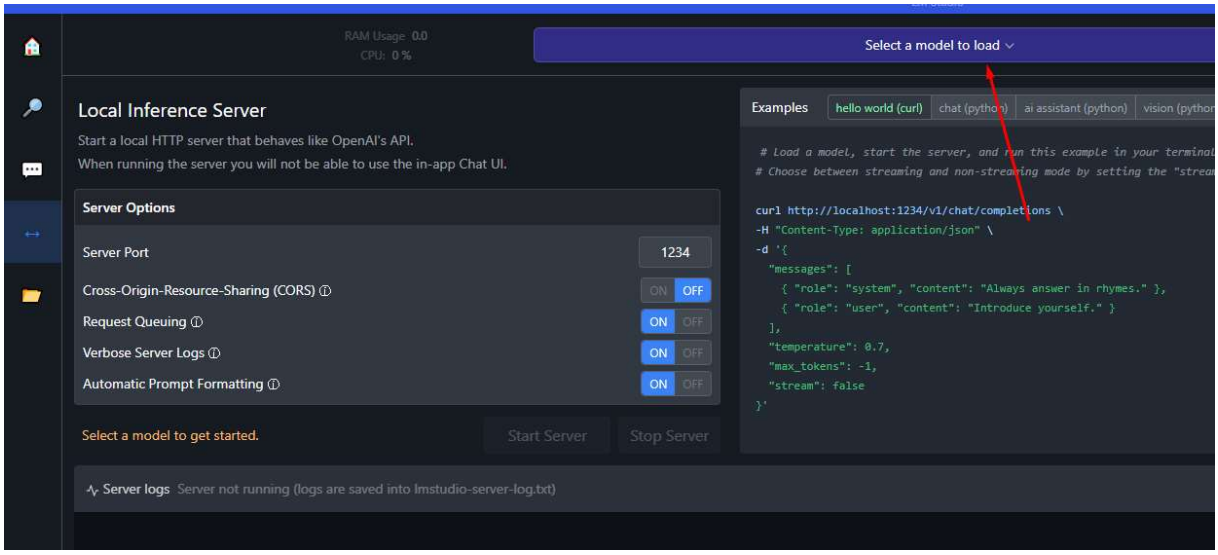


Run the model as local server

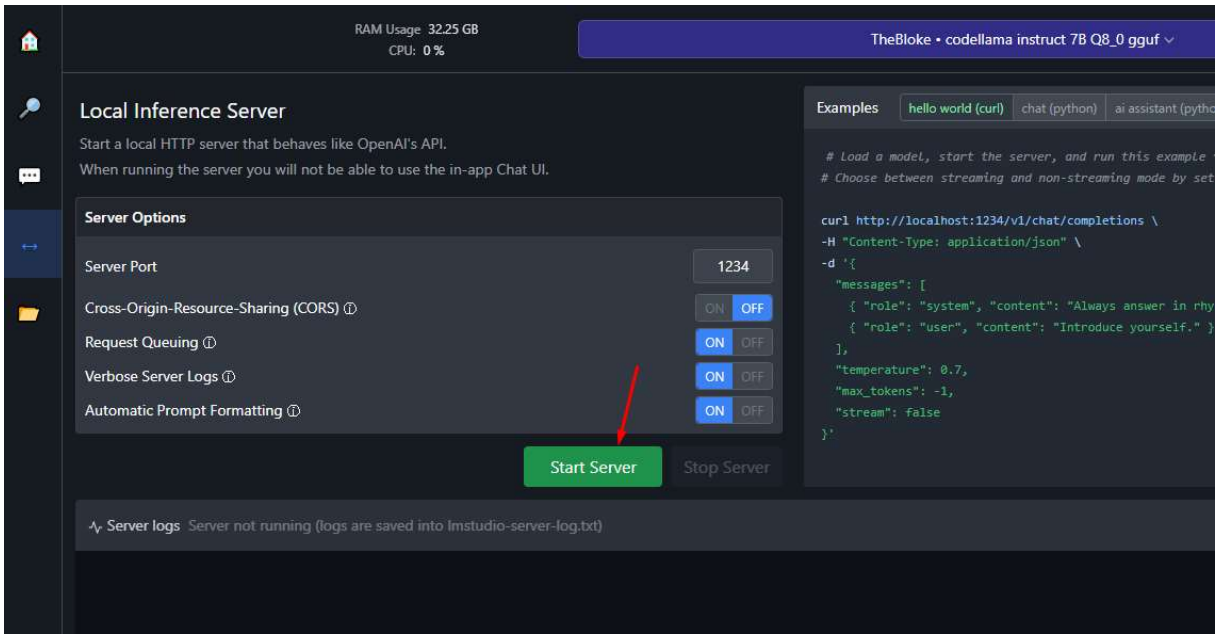
To run the model locally, you have to switch to the “Local Inference Server” tab on the left.



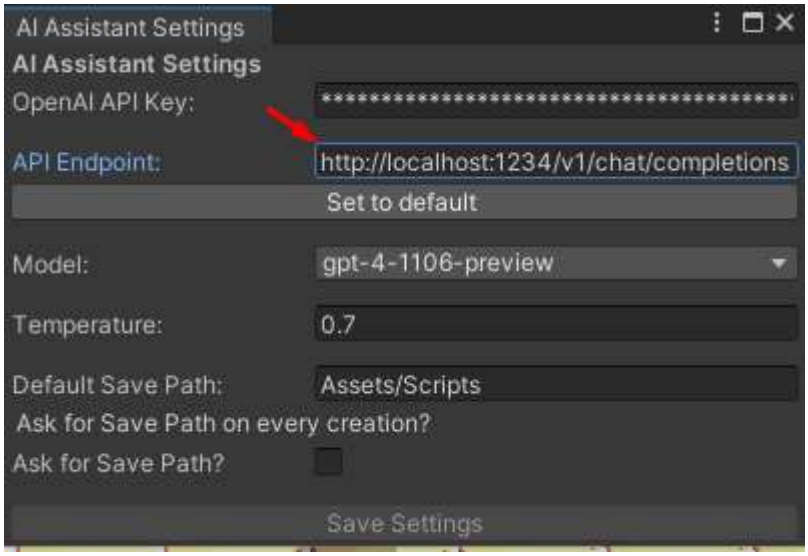
After that you select a model to load



After loading, the button “Start Server” will be activated so you can click on it to start the server.



After starting the server you have to copy the URL (here: http://localhost:1234/v1/chat/completions) and insert it into the settings of uAI.



Tools

This comprehensive package is equipped with a diverse range of tools that will assist you throughout your GameDev journey.

GPT Window

Description

One of the most important features is the GPT Window where you can freely communicate with the Chatbot and ask anything or give him instructions. The advanced AI technology ensures that the Chatbot retains previous conversations and effortlessly connects related messages for a seamless dialogue experience.

Rest assured, all conversations are saved, allowing you to revisit them at any time. Plus, you have the flexibility to delete conversations that are no longer relevant to your needs. With this all-in-one package, you can streamline your GameDev process and achieve your desired results with ease.

In addition, it is recommended to regularly delete old messages in a conversation to free up space and ensure that the Chatbot has enough tokens to continue processing new messages effectively. This will help optimize the performance of the Chatbot and ensure a smooth communication experience. It also will save you money!

Example:

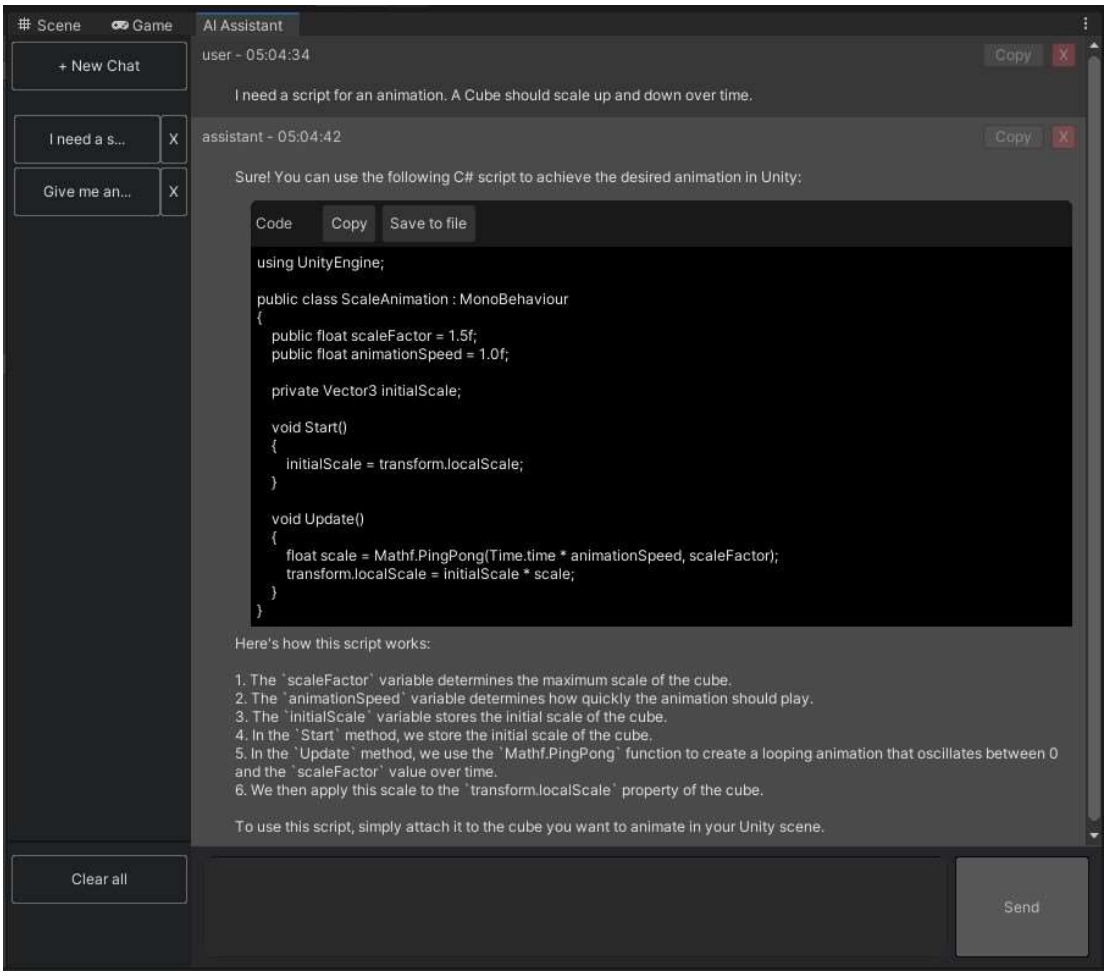


Figure 8 AI Assistant window

Script Creator and Editor

Description

With the Script Creator and Editor, creating and editing scripts in Unity has never been easier. Rather than manually typing out code, you can simply instruct the AI on what the script should do.

Need to add a new function or modify an existing one? No problem! You can easily make changes by providing clear instructions, such as "Add the function 'checkGrounded()' to the script". Whether you're a seasoned programmer or new to coding, the Script Creator and Editor streamlines the process and saves you time. If you're happy with the code, creating a new script file is a breeze with the "Create" button. Simply click the button and give your new script a name. From there, you can start adding instructions and building out your code. Whether you're creating a simple script or a more complex one, the Script Creator and Editor makes the process fast and easy.

Example

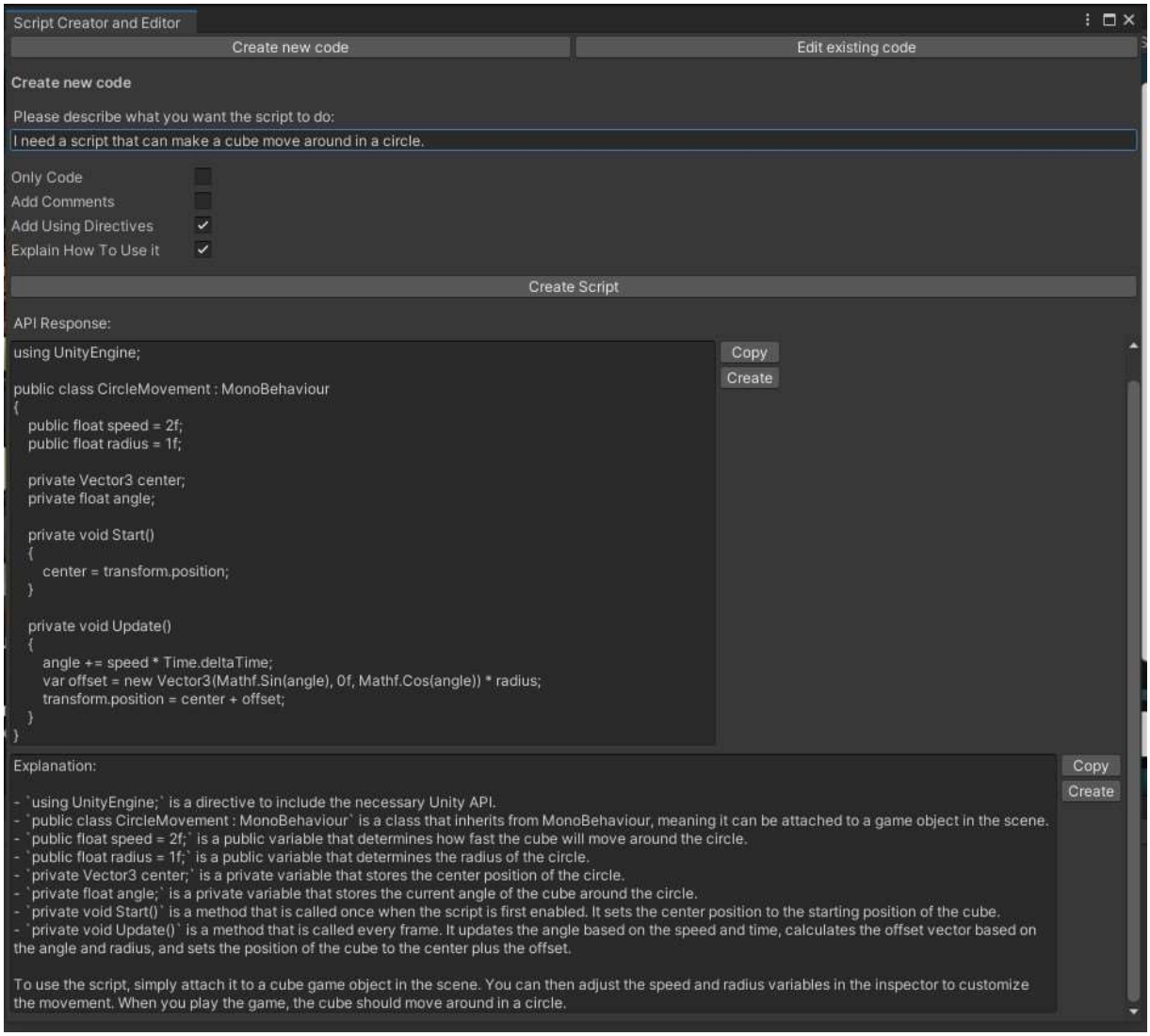


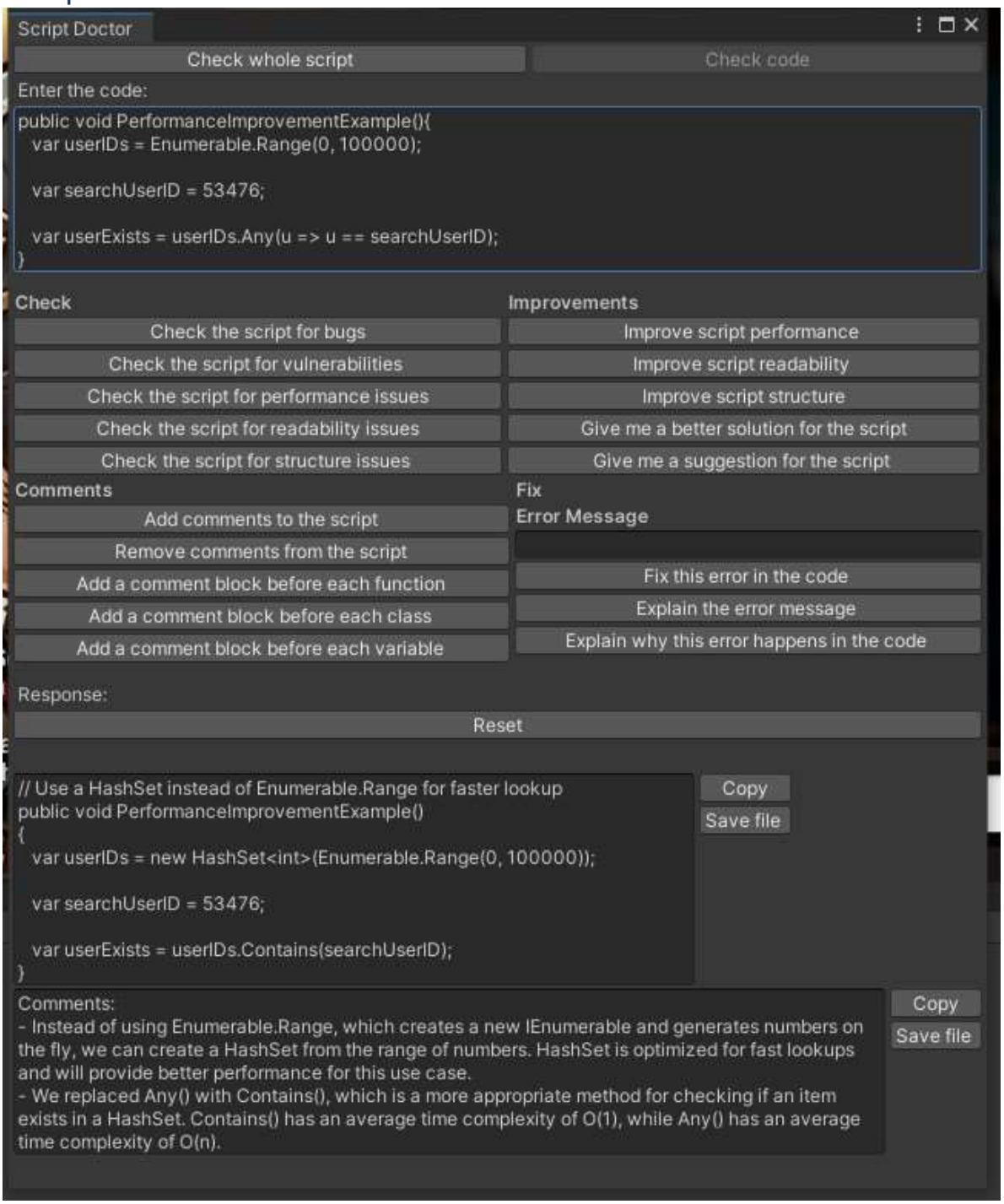
Figure 9 Script Creator and Editor window

Script Doctor

Description

The Script Doctor is a versatile and powerful tool designed to help you edit and modify your code with ease. Whether you need to make sweeping changes to an entire script or tweak a specific code snippet, the Script Doctor has you covered. With its intuitive interface and comprehensive features, you can quickly and efficiently optimize your code for maximum performance and functionality.

Example:



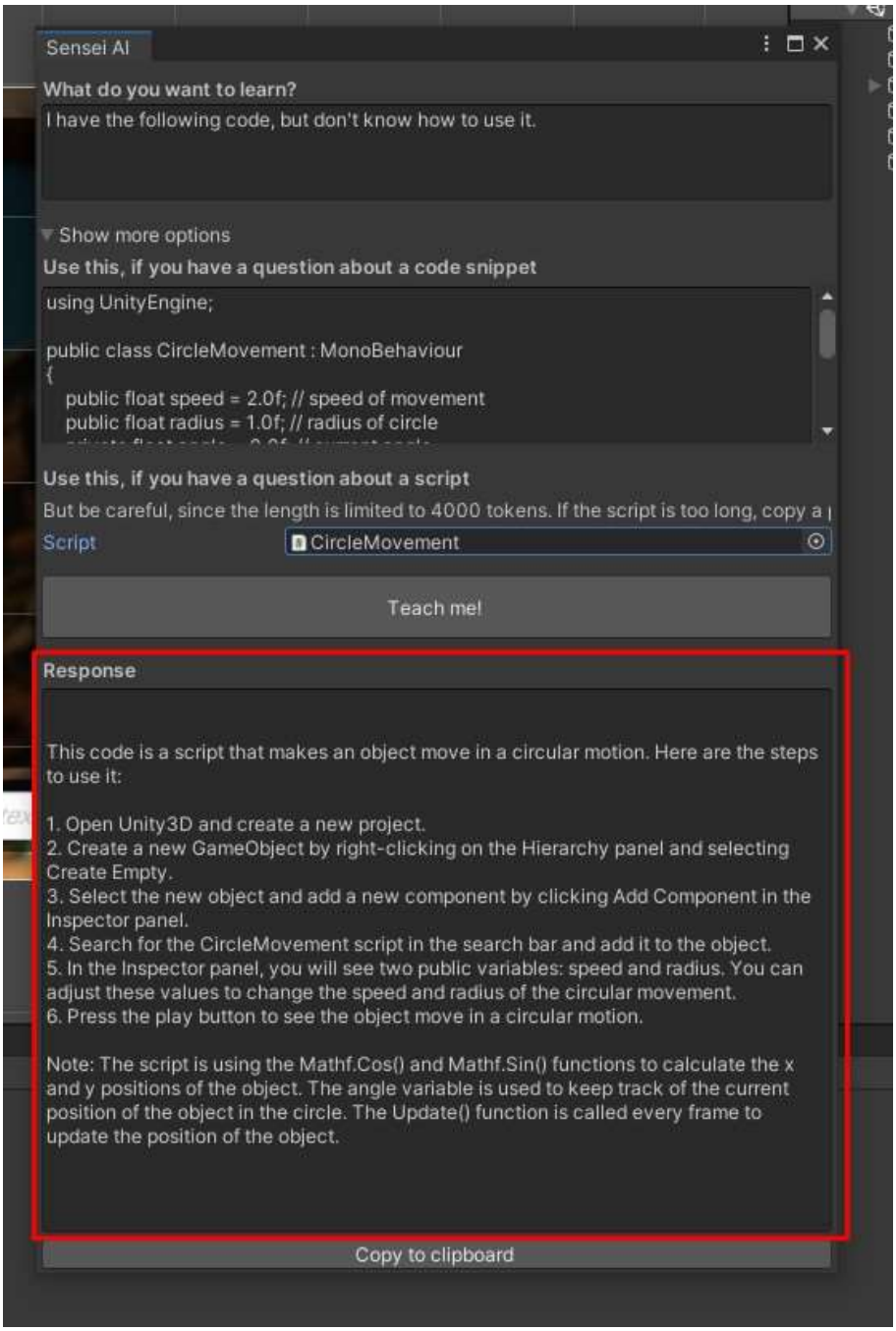
Sensei AI

Description

Sensei AI is a Unity editor window designed to facilitate inquiry regarding any aspect of Unity3D. This tool allows users to pose questions related to Unity3D and receive informative responses in real-time.

In the following example you can see how the Sensei AI explains the usage of code that the Script Creator has created previously.

Example



Name Generator

Description

The Name Generator is a powerful tool designed to assist writers, game developers, and anyone in need of creative and original names for their characters, cities, guilds, continents, and more. With a simple and user-friendly interface, the Name Generator offers a wide range of options to create unique and memorable names for any purpose.

The Name Generator employs advanced algorithms and artificial intelligence to create names that are not only unique but also meaningful and evocative. Users can instruct the AI with a wide range of languages, including English, Latin, Greek, and many more, to create names that fit their desired cultural or linguistic context.

Whether you're writing a novel, creating a game, or just looking for a creative and original name for your pet, the Name Generator is the perfect tool to help you come up with the perfect name.

Example

Note: Custom Name Generator was used in the screenshot.

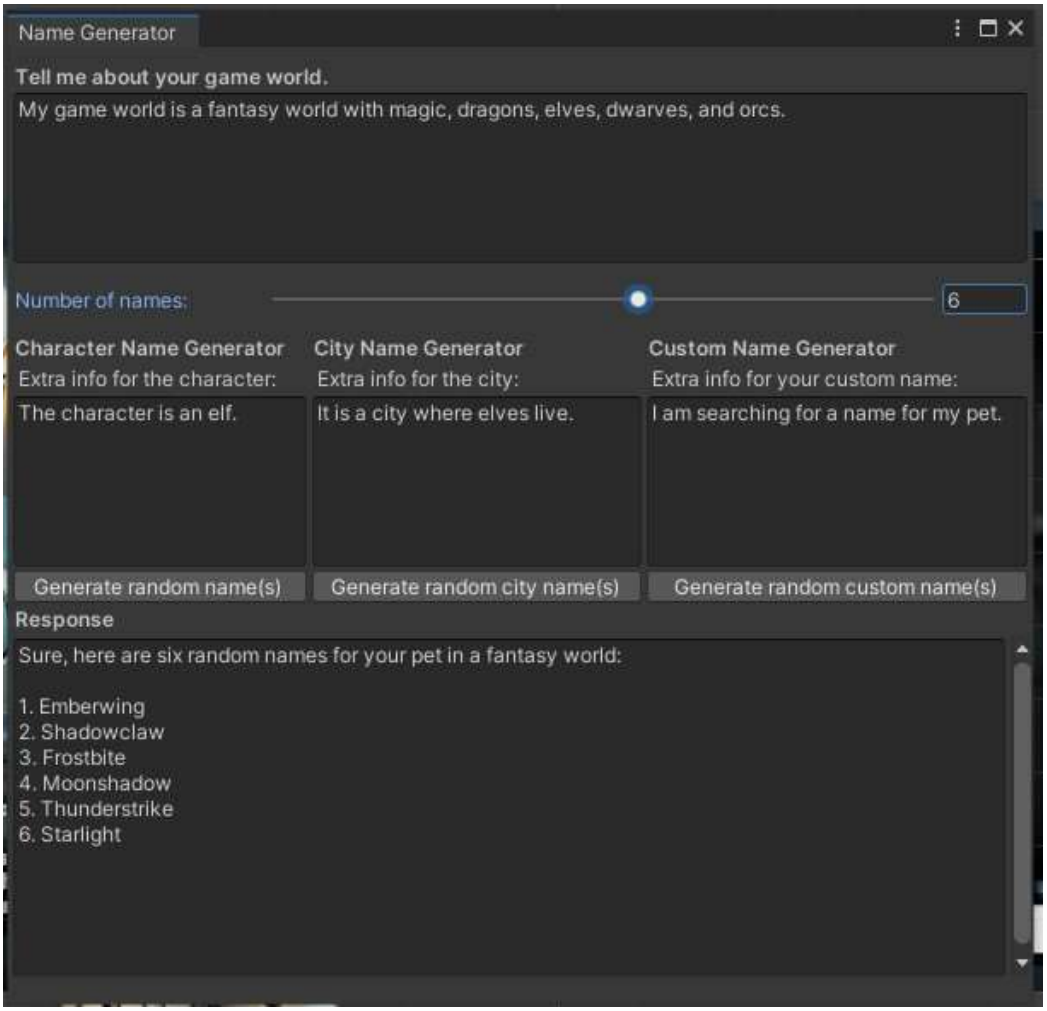


Figure 10 Name Generator window

Quest Generator

Description

The Quest Generator is a powerful and versatile tool that empowers game developers and designers to create immersive and captivating quests for their players. With a user-friendly interface and a wealth of options, the Quest Generator makes it easy to craft quests that fit any genre or setting, from high fantasy to science fiction to modern-day thrillers.

With its advanced algorithms and artificial intelligence, the Quest Generator creates quests that are not only engaging and exciting but also tailored to the specific needs and preferences of the user. Whether you're a seasoned game developer or a novice gamemaster, the Quest Generator is the perfect tool to help you create unforgettable quests that will keep your players coming back for more.

Example

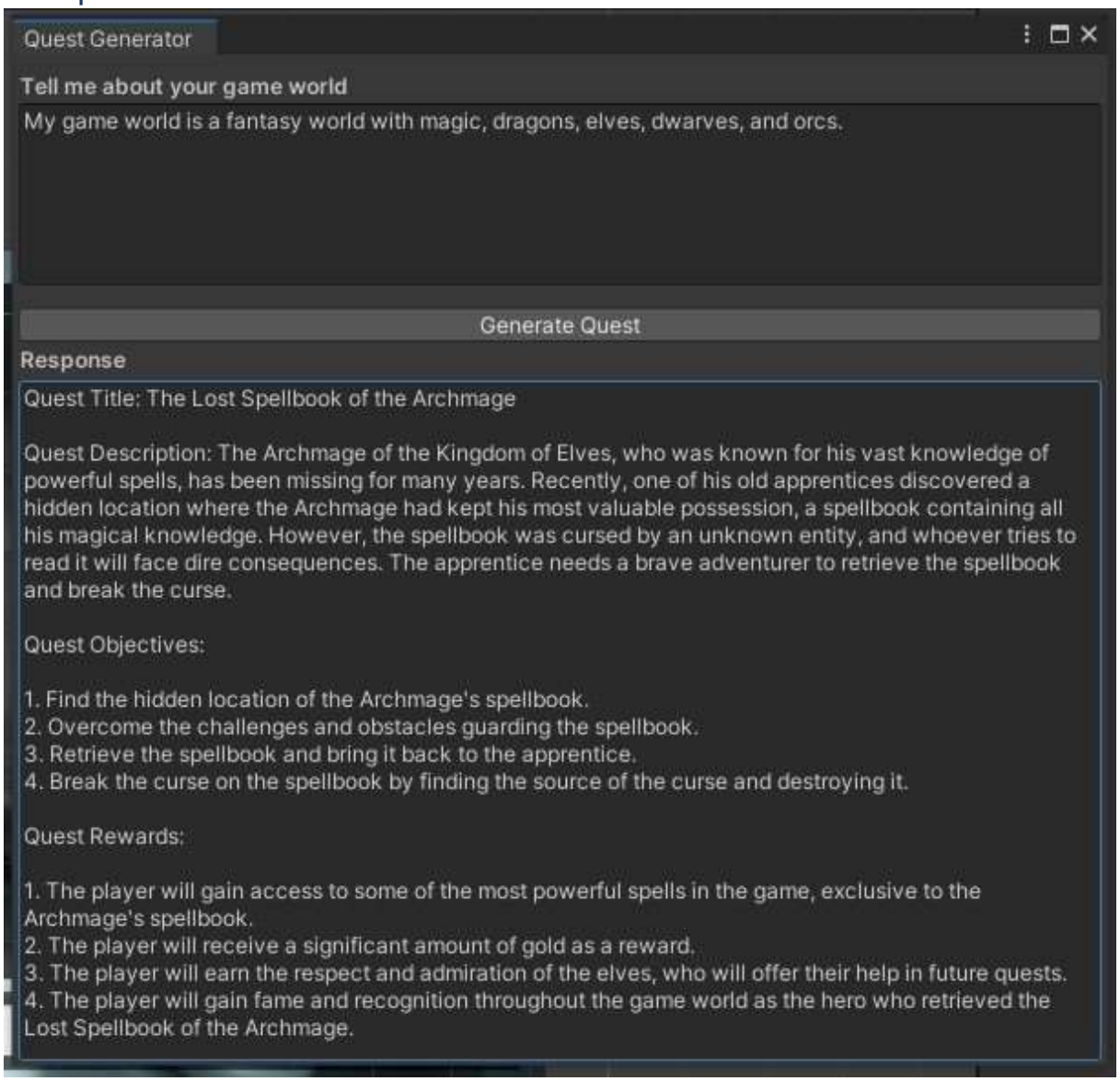


Figure 11 Quest Generator window

Spell Checker

Description

"Spell checker" is a powerful tool that helps you identify and correct spelling errors in your Unity project. With this tool, you can quickly scan a desired text and detect any misspelled words, ensuring that your project is free of embarrassing typos and errors.

Whether you're a seasoned programmer or just starting out, "Spell checker" is an essential tool for anyone looking to improve the quality and accuracy of their text.

Example:

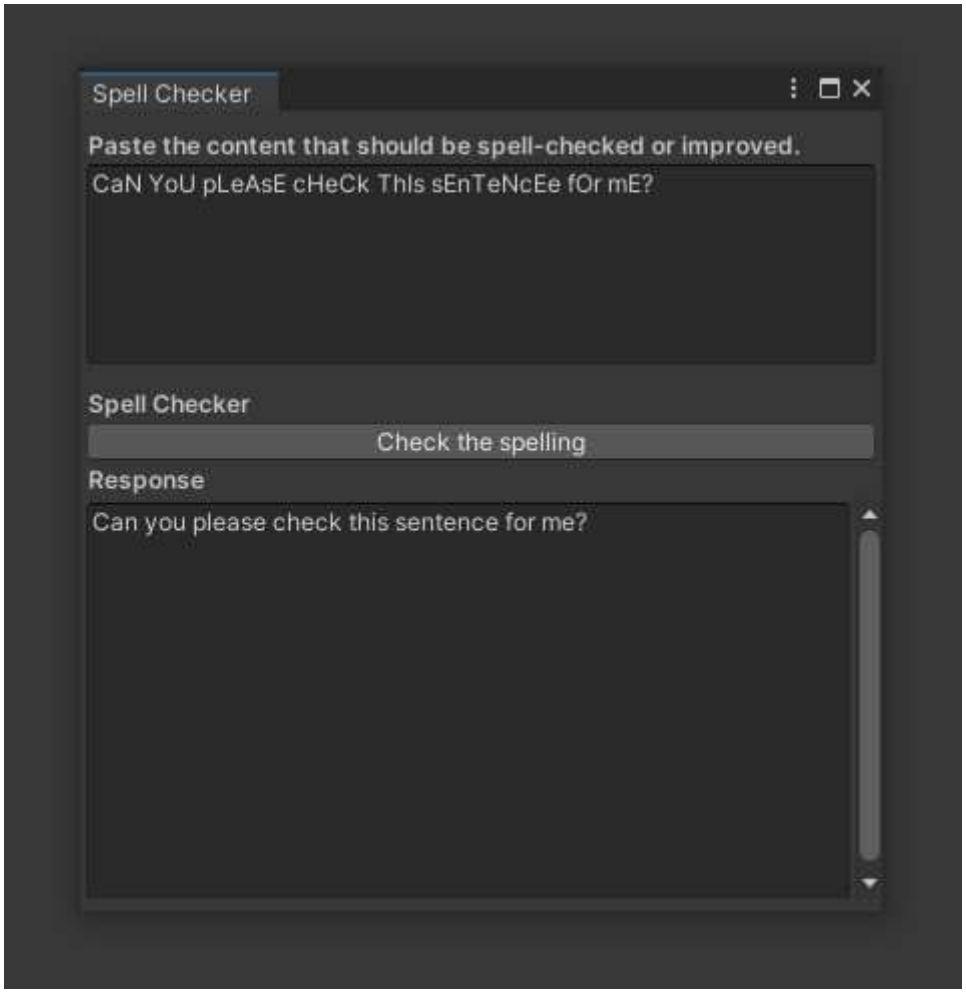


Figure 12 Spell Checker window

Text Refiner

Description

The "Text Refiner" tool is a powerful and versatile tool that helps you refine and optimize the text in your Unity project. With this tool, you can quickly and easily improve the readability and clarity of your text, ensuring that it looks professional and polished.

The "Text Refiner" tool is a powerful tool designed to modify and enhance text in various ways. It allows users to transform plain and simple text into something more creative and engaging.

With this tool, you can convert your text into a pirate's language, medieval language, or any other language that you desire.

The Text Refiner tool makes it easy to add a unique touch to your text, making it stand out and capture your audience's attention.

Example

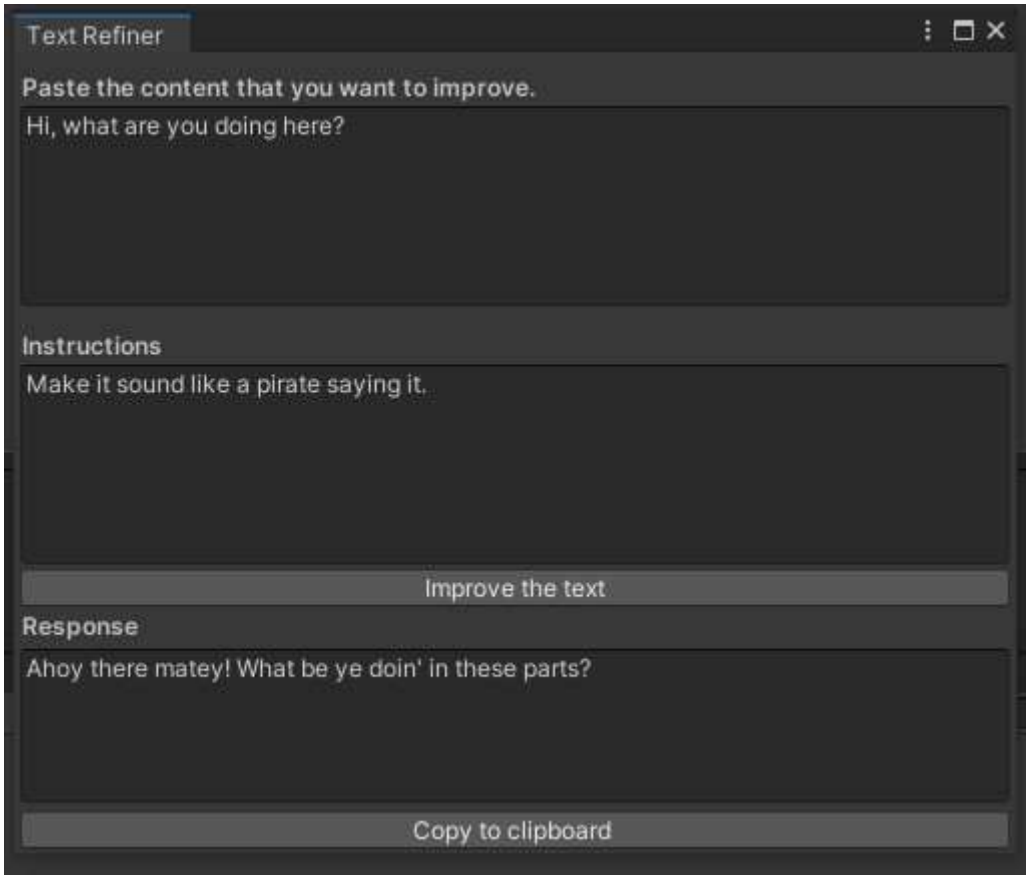


Figure 13 Text Refiner window

Translator

Description

The "Translator" tool is an essential asset for any Unity Game developer who wants to create a fully immersive and localized game. With this tool, you can easily translate your game's text into multiple languages.

But that's not all - the Translator tool also allows you to add extra characteristics to your translations, such as "informal", "formal", "angry", "polite", and more. This means that you can tailor your text to suit the tone and style of your game, and create a truly unique experience for players.

The Translator tool is easy to use, with a simple interface. Whether you're creating a mobile game, a PC game, or a console game, the Translator tool is an essential asset that will help you create a truly immersive and localized experience for players around the world.

Example

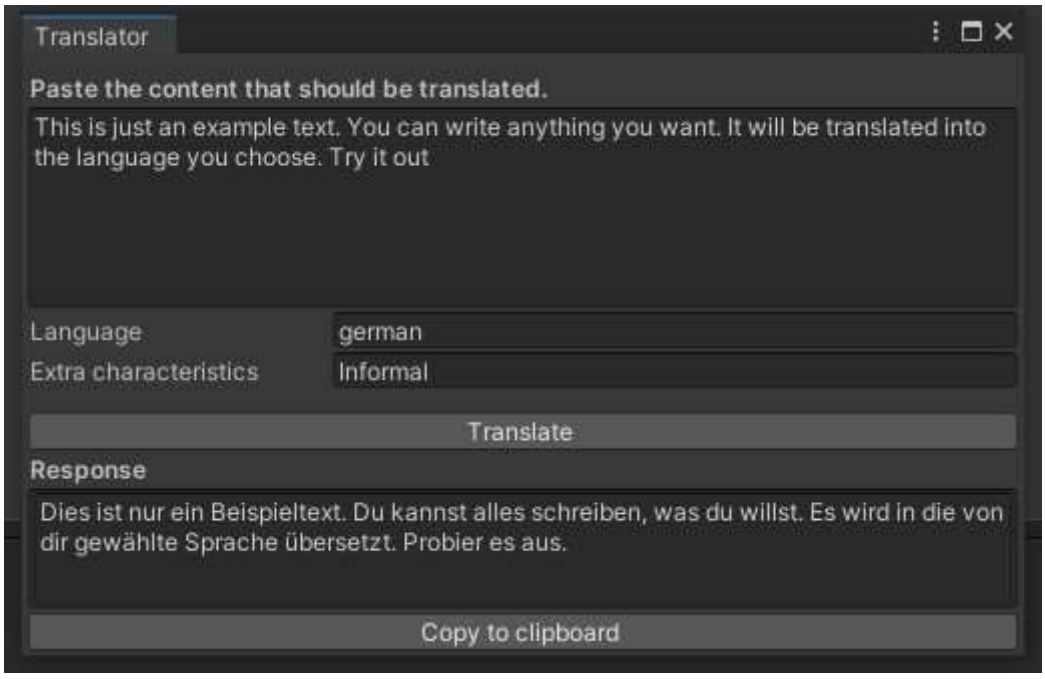


Figure 14 Translator window