

Essentials of Generative AI, Prompt Engineering, and ChatGPT



OpenAI Playground App



Learning Objectives

By the end of this lesson, you will be able to:

- 🕒 Interpret OpenAI Playground's parameters to modify ChatGPT's behavior and output
- 🕒 Apply the Playground app's features to boost creative writing and language proficiency
- 🕒 Explore advanced applications of ChatGPT through the Playground app
- 🕒 Personalize interactions with ChatGPT by incorporating system messages, specifying user personas or roles, and providing iterative feedback





Introduction to OpenAI Playground App

OpenAI Playground App

The OpenAI Playground app is a user-friendly platform that enables individuals to interact with ChatGPT, OpenAI's language model.

The platform allows customization through models, temperature, and max tokens settings.

Users can engage in interactive conversations using messages or have single prompt interactions.

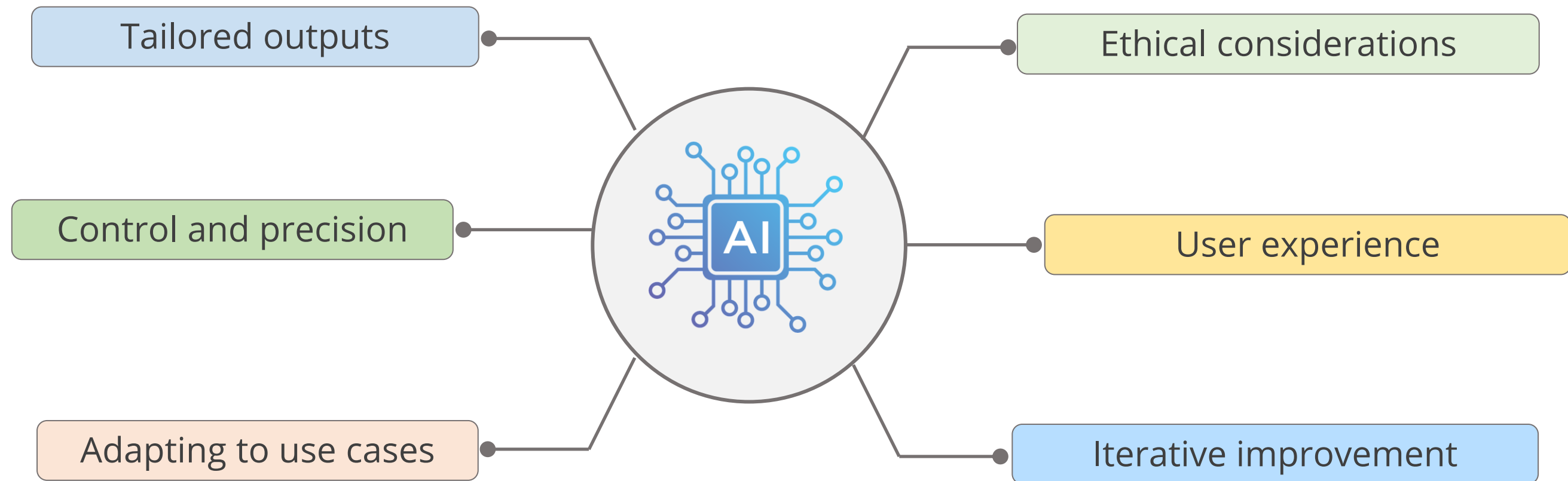
The platform supports various use cases, including summarization, text classification, generating outlines, research, business plans, and code assistance.

Personalization options are available, such as using system messages, user personas, and providing iterative feedback.

It is an accessible and a versatile platform for exploring and utilizing the capabilities of ChatGPT.

Power of Customization and Parameter Options

Customization and parameter options provide several benefits in AI interactions, including:



Power of Customization and Parameter Options

The power of OpenAI interactions offers the following benefits:

Tailored outputs

Users can adjust parameters like temperature and max tokens to tailor AI models' behavior and responses, optimizing them for specific needs and requirements.

Control and precision

Users gain control over AI models through customization; by selecting specific models and adjusting parameters, they can optimize performance and achieve precise results for their tasks.

Adapting to use cases

AI models adjust to diverse use cases, like summarizing, text-classifying, or code-assisting, through user-customizable parameters.

Power of Customization and Parameter Options

Ethical considerations

Customization allows users to address ethical concerns in AI by setting parameters for appropriate responses, mitigating biases, and upholding privacy and fairness standards.

User experience

Customization tailors AI interactions to user preferences, with parameter options for personalized experiences.

Iterative improvement

Customization and parameter options enable an iterative feedback loop. Users provide feedback and refine parameters for continuous AI model improvement.



Playground Parameter Options

Playground Parameter Options

The OpenAI Playground app offers customizable parameters and diverse data sources to optimize the behavior and output of the ChatGPT model.

Feature	Description
Data sources	Support structured, unstructured, and semi-structured data
External source	Users can select from different models available in the Playground app
Temperature	Controls the output randomness of the model
Data warehouse	Central repository for storing data
Chat format	Two chat formats: Messages and single prompt
Data mart	Storage for specific company operations
Max tokens	Limit the length of the model's response

Different Model Options in the OpenAI Playground

The OpenAI API is powered by models with varying abilities.

GPT-4 and GPT-4 Turbo

- GPT-4 is a large multimodal model (accepting text or image inputs and outputting text) that can solve difficult problems with greater accuracy.

GPT-3.5 and GPT 3.5 Turbo

- GPT-3.5 models can understand and generate natural language or code. It is the most capable and cost-effective model.

Earlier versions

- Prior to GPT-4 and GPT 3.5 models, GPT-3 were available.
- GPT-3 was a highly advanced language model that garnered significant attention due to its ability to perform various language-related tasks.

Impact of Models on the Capabilities of ChatGPT

The impact of different models on the capabilities of ChatGPT are as follows:

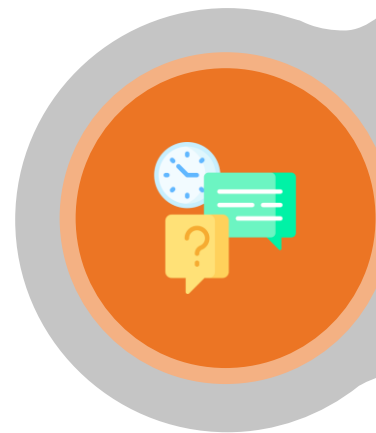
Language understanding



Task performance



Response generation



Efficiency and cost



Impact of Models on the Capabilities of ChatGPT



Language understanding

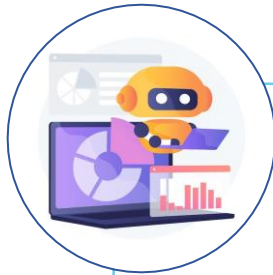
- Larger models with extensive training datasets and more parameters understand human language better.
- They can handle complex prompts and queries, leading to more accurate and detailed responses.



Response generation

- AI language models generate coherent, contextually relevant, and high-quality human-like responses.
- They learn patterns during training to enhance their performance.

Impact of Models on the Capabilities of ChatGPT



Task performance

- Different models excel in specific tasks.
- Some are optimized for summarization, code generation, or text completion.
- Understanding each model's capabilities helps users choose the most suitable one for their task.



Efficiency and cost

- Models such as GPT-3.5-turbo strike a balance between capability and cost-effectiveness.
- They offer significant performance enhancements and improved computational efficiency, making them practical for various applications.

Temperature in OpenAI Playground

In models like ChatGPT, the temperature parameter controls output randomness. With values ranging from 0 to 1, higher values increase randomness, while lower values decrease it.

Higher temperature (Example: 0.8)

- Higher temperature values increase randomness, diversity, and creativity in model responses.
- Increased temperature introduces greater variation in word choice and sentence structures.
- This fosters imaginative and creative outputs, making it valuable for idea exploration and generating novel content.

Lower temperature (Example: 0.2)

- A lower temperature, like 0.2, allows for greater control and closely aligns responses with the input context.
- Lower temperature values yield focused and deterministic responses, reducing randomness.
- Lower temperature results in less variation in word choice and sentence structures, leading to predictable responses in line with the input context.

Chat Formats in OpenAI Playground

The OpenAI Playground app supports two chat formats: Messages and single prompt. These formats offer different ways to interact with ChatGPT, catering to various use cases and preferences.

Messages

- This chat format allows users to engage in interactive conversations with the model.
- Users can input a series of messages, alternating between the user and assistant roles.

Single prompt

- Users input a prompt or query as the initial message and the model generates a single response based on that prompt.

Max Tokens in OpenAI Playground

Max tokens limit the response length by specifying the maximum number of tokens allowed in the output, preventing further token generation after reaching the limit.

Importance of max tokens

Output length control

Users can control the length of the response by setting a specific value for max tokens.

Context preservation

Max tokens also play a role in preserving the context of the conversation.

Resource efficiency

Setting an appropriate value for max tokens is crucial for optimizing computational resources.



Playground Usage

Playground Usage

The OpenAI Playground app offers a range of practical use cases and applications.

The screenshot displays the OpenAI Playground interface. On the left, a 'Get started' sidebar provides instructions and a 'KEEP IN MIND' section with three items: a warning icon about sharing outputs, a shield icon about API usage for training, and a calendar icon about training data cutoff. The main 'Playground' area has a 'Chat' tab and a 'Your presets' dropdown. It features a system message box with the text 'Fix the grammar completely', a user input field with the placeholder 'Enter a user message here.', and an 'Add message' button. A 'Submit' button is at the bottom right of the chat area. On the right side, there are settings for 'Model' (gpt-3.5-turbo), 'Temperature' (1), 'Maximum length' (256), 'Stop sequences' (a text input field), 'Top P' (1), 'Frequency penalty' (0), and 'Presence penalty' (0). At the bottom right, a disclaimer states: 'API and Playground requests will not be used to'.

Get started ×

Enter an instruction or select a preset, and watch the API respond with a **completion** that attempts to match the context or pattern you provided.

You can control which **model** completes your request by changing the model.

KEEP IN MIND

- ⚠ Use good judgment when sharing outputs, and attribute them to your name or company. [Learn more.](#)
- 🛡 Requests submitted to our API and Playground will not be used to train or improve future models. [Learn more.](#)
- 📅 Our default models' training data cuts off in 2021, so they may not have knowledge of current events.

Playground Chat ▾

Your presets ▾ Save View code Share ⋮

SYSTEM

Fix the grammar completely

USER Enter a user message here.

⊕ Add message

Submit ↺

Model: gpt-3.5-turbo ▾

Temperature: 1

Maximum length: 256

Stop sequences: Enter sequence and press Tab

Top P: 1

Frequency penalty: 0

Presence penalty: 0

⚠ API and Playground requests will not be used to

Playground Usage

You can check the model used, set the temperature, response length, and other settings as shown below:

The screenshot displays the OpenAI Playground interface. On the left, a sidebar titled "Get started" provides instructions and a "KEEP IN MIND" section. The main area is titled "Playground" and includes a "Chat" tab, a "Your presets" dropdown, and buttons for "Save", "View code", "Share", and a menu icon. The interface is divided into two main sections: "SYSTEM" and "USER". The "SYSTEM" section contains the prompt "Fix the grammar completely". The "USER" section has a placeholder "Enter a user message here." and an "Add message" button. At the bottom right, a settings sidebar is visible, containing options for "Model" (gpt-3.5-turbo), "Temperature" (1), "Maximum length" (256), "Stop sequences", "Top P" (1), "Frequency penalty" (0), and "Presence penalty" (0). A "Submit" button is located at the bottom center of the main area.

Get started

Enter an instruction or select a preset, and watch the API respond with a **completion** that attempts to match the context or pattern you provided.

You can control which **model** completes your request by changing the model.

KEEP IN MIND

- Use good judgment when sharing outputs, and attribute them to your name or company. [Learn more.](#)
- Requests submitted to our API and Playground will not be used to train or improve future models. [Learn more.](#)
- Our default models' training data cuts off in 2021, so they may not have knowledge of current events.

Playground Chat

Your presets Save View code Share

SYSTEM

Fix the grammar completely

USER Enter a user message here.

+ Add message

Submit

Model

gpt-3.5-turbo

Temperature 1

Maximum length 256

Stop sequences
Enter sequence and press Tab

Top P 1

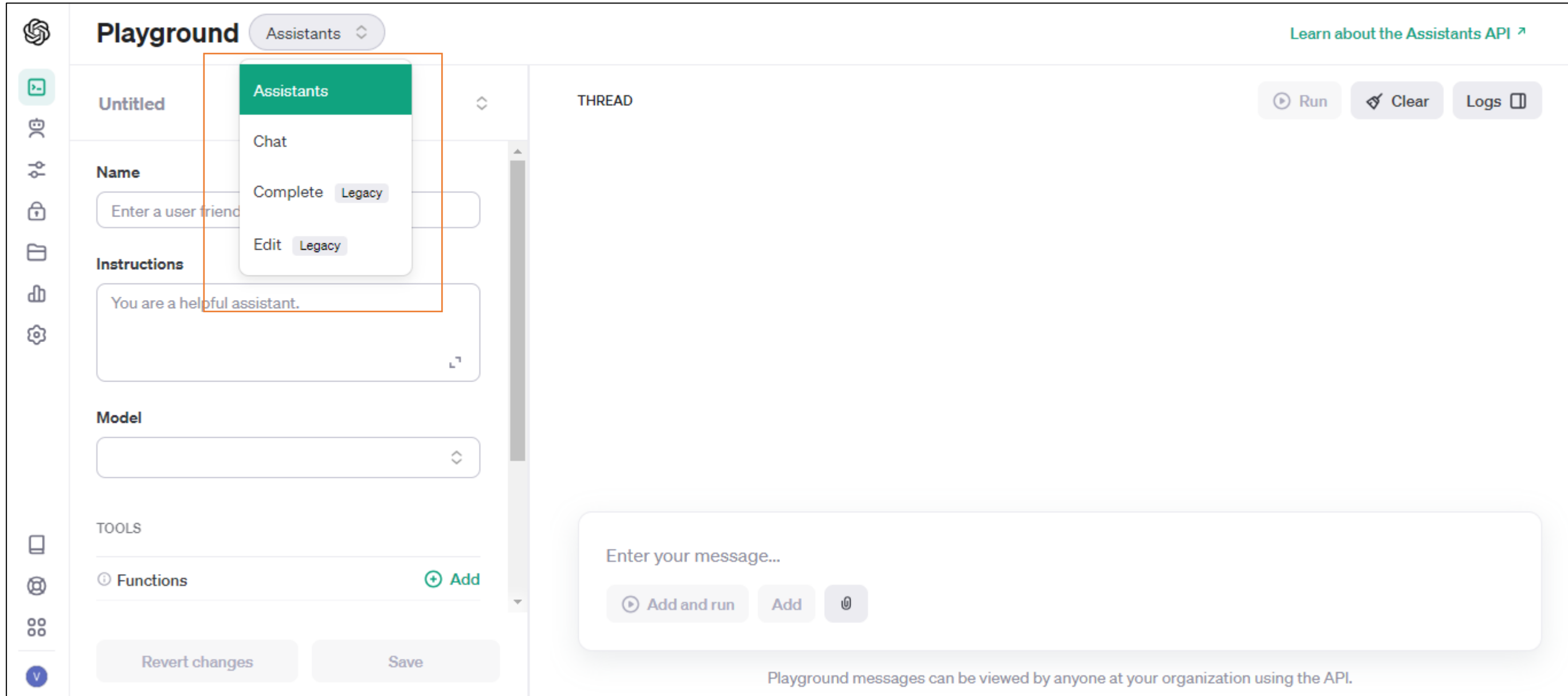
Frequency penalty 0

Presence penalty 0

API and Playground requests will not be used to

Playground Usage

The Playground offers four APIs, namely Chat, Assistant, Complete, and Edit. Select any of these based on your specific needs.



The screenshot displays the OpenAI Playground interface. On the left sidebar, there are icons for various tools and settings. The main panel is titled "Playground" and features a dropdown menu labeled "Assistants" which is currently open, showing options: "Assistants" (highlighted in green), "Chat", "Complete" (with a "Legacy" tag), and "Edit" (with a "Legacy" tag). Below the dropdown, there are input fields for "Name" (placeholder: "Enter a user friend"), "Instructions" (placeholder: "You are a helpful assistant."), and "Model". At the bottom of the left panel, there is a "TOOLS" section with a "Functions" list and an "Add" button. The right panel shows a "THREAD" section with "Run", "Clear", and "Logs" buttons. At the bottom of the right panel, there is a text input field labeled "Enter your message..." with "Add and run", "Add", and a microphone icon buttons. A disclaimer at the bottom states: "Playground messages can be viewed by anyone at your organization using the API."

Playground

Assistants

Untitled

Assistants

Chat

Complete Legacy

Edit Legacy

Name

Enter a user friend

Instructions

You are a helpful assistant.

Model

TOOLS

Functions Add

Revert changes Save

THREAD

Run Clear Logs

Enter your message...

Add and run Add

Playground messages can be viewed by anyone at your organization using the API.

Playground Usage

Here are some common ways in which the Playground app can be utilized:

Content generation



Writing blogs, scripts, articles, and others

Programming help



Debugging code and providing snippets

Learning aid



Explaining topics across various subjects

Language translation



Translating between languages

Brainstorming



Generating ideas related to a topic

Playground Usage

Here are some common ways in which the Playground app can be utilized:

Answering questions



Serving as an information resource

Role-play scenarios



Simulating characters for storytelling

Product descriptions



Creating descriptions for e-commerce

Simulating conversations



Practicing dialogues or discussions

Personal assistant tasks



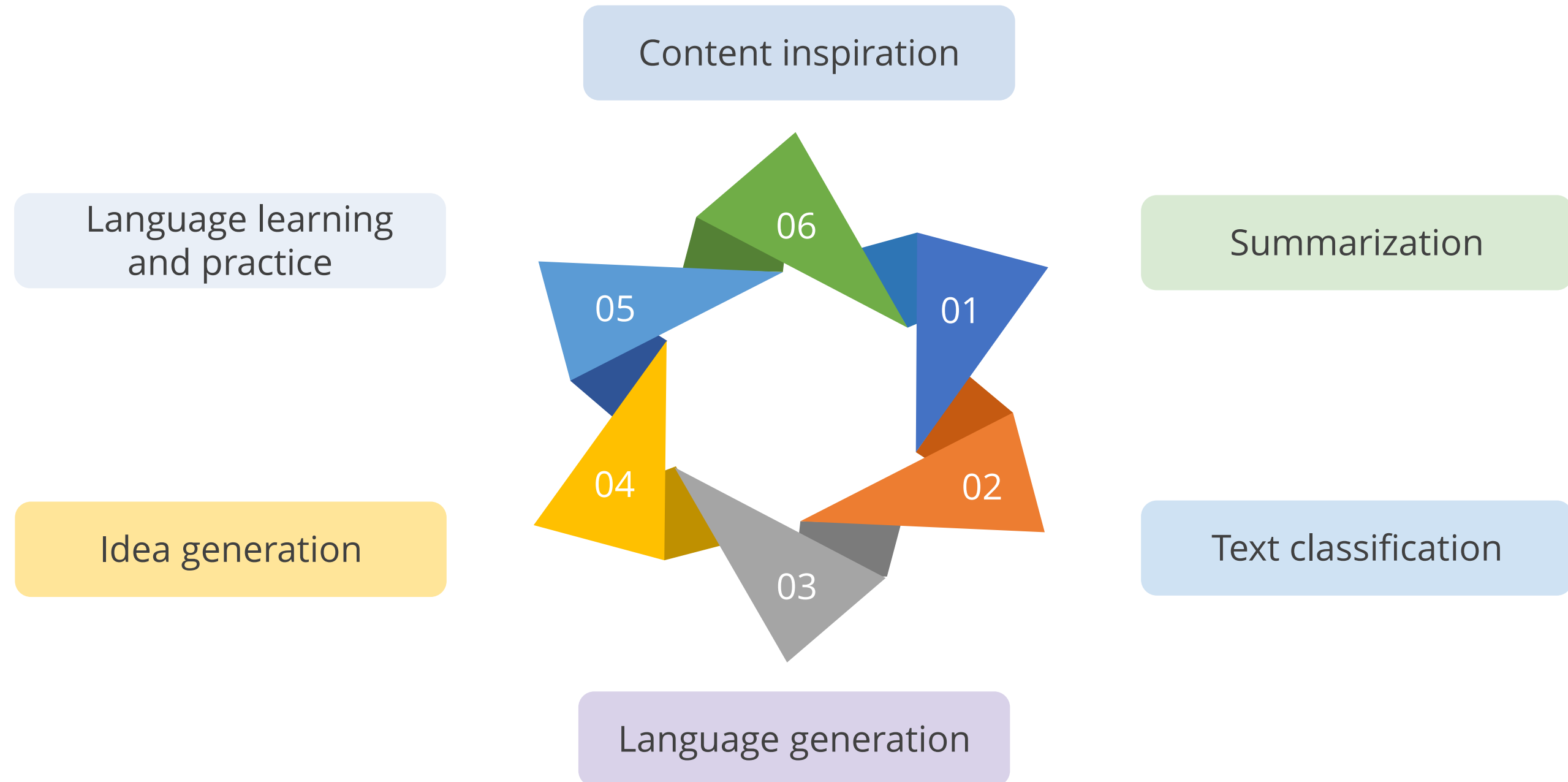
Setting reminders and creating lists



Features of Playground

Features of Playground App

The features and functionalities of the Playground app are as follows:



Features of Playground App

Summarization

Generates concise summaries from longer documents, capturing main points and key information for text summarization tasks

Text classification

Allows users to train the model to categorize text based on predefined categories, guiding the model's understanding through labeled examples and system messages for text classification tasks

Language generation

Enables users to have interactive conversations with ChatGPT, alternating between the user and assistant roles, for dynamic exchanges and responses in the Playground app

Features of Playground App

Idea generation

Provides new perspectives and alternate ideas to different but well-structured prompts thus allowing for brainstorming and creative thinking

Language learning and practice

Serves as a language learning tool, allowing users to practice language skills by conversing with ChatGPT and seeking explanations on various topics

Content inspiration

Sparks content creation by generating responses or suggestions from input prompts, providing inspiration for articles, stories, or other forms of content



Personalizing Your ChatGPT

Personalizing Your ChatGPT

Personalization is an important aspect of interacting with ChatGPT through the OpenAI Playground app. Here are some ways to personalize ChatGPT interactions:

System messages: Incorporate high-level instructions to guide ChatGPT's behavior and style

User messages: Specify the role or persona for the model to adopt during conversations

Iterative feedback: Provide feedback to ChatGPT during conversations to refine its responses



Group Activity

Group Activity: Exploring OpenAI Playground with Different APIs

1. Get into your respective breakout rooms.
2. Explore the capabilities of OpenAI Playground by interacting with its various APIs, such as Chat, Assistant, Complete, and Edit.
3. Analyze how each API functions and how they can be applied in different scenarios.
4. Come back to the main Zoom room to present your output.
5. Discuss the interface and use cases of APIs in a class.

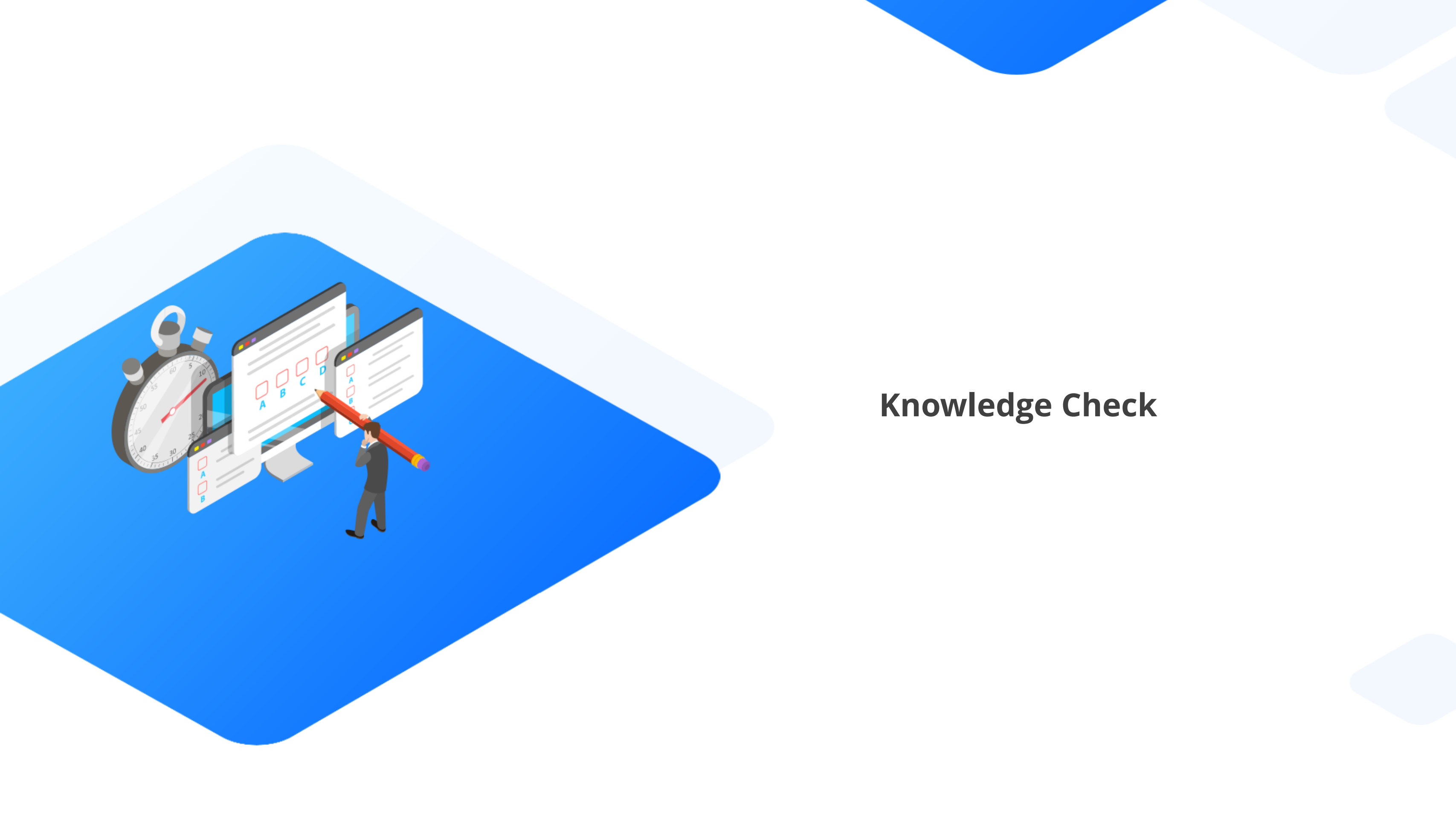
Remember: This exercise is meant to provide a hands-on understanding of the diverse applications of OpenAI Playground APIs. By exploring these tools, you can gain insights into how AI can be integrated into various aspects of work and creativity.

Note: Create a new OpenAI Playground account if your current one is older than four months.

Key Takeaways

- 🕒 The OpenAI Playground app enables interactive customization and support for various tasks with iterative feedback for ChatGPT.
- 🕒 Customization empowers users to control AI models, optimize performance, and achieve precise task results.
- 🕒 Max tokens restrict the response length by defining the maximum number of tokens in the output, preventing token generation beyond the set limit.
- 🕒 System messages guide the model's tone, while user messages define the persona, allowing for personalized and engaging interactions through iterative feedback.





Knowledge Check

Knowledge Check

1

Which parameter option in the OpenAI Playground app determines the level of response randomness and creativity?

- A. Models
- B. Temperature
- C. Chat Format
- D. Max Tokens



Knowledge Check

1

Which parameter option in the OpenAI Playground app determines the level of response randomness and creativity?

- A. Models
- B. Temperature
- C. Chat Format
- D. Max Tokens



The correct answer is **B**

The temperature parameter in the OpenAI Playground app controls the degree of response randomness and creativity.

Knowledge Check

2

What is the role of the Max Tokens parameter in the OpenAI Playground app?

- A. It determines the available models.
- B. It controls the response randomness.
- C. It sets the length of the model's response.
- D. It specifies the chat format.



Knowledge Check

2

What is the role of the Max Tokens parameter in the OpenAI Playground app?

- A. It determines the available models.
- B. It controls the response randomness.
- C. It sets the length of the model's response.
- D. It specifies the chat format.

The correct answer is **C**

The Max Tokens parameter in the OpenAI Playground app determines the length of the model's response.



**Knowledge
Check**
3

Which section of the OpenAI Playground app explores text classification using ChatGPT?

- A. Playground parameter options
- B. Playground usage
- C. Advanced uses of ChatGPT
- D. Personalizing your ChatGPT



Knowledge Check

3

Which section of the OpenAI Playground app explores text classification using ChatGPT?

- A. Playground parameter options
- B. Playground usage
- C. Advanced uses of ChatGPT
- D. Personalizing your ChatGPT

The correct answer is **B**

The Playground usage section of the OpenAI Playground app provides a platform for exploring text classification with ChatGPT.



Knowledge Check

4

How can ChatGPT be utilized for generating outlines for written content?

- A. By providing system messages
- B. By setting the temperature parameter
- C. By using the outlines feature
- D. By incorporating user feedback



Knowledge Check

4

How can ChatGPT be utilized for generating outlines for written content?

- A. By providing system messages
- B. By setting the temperature parameter
- C. By using the outlines feature
- D. By incorporating user feedback



The correct answer is **C**

Users can generate outlines for written content using the outlines feature in ChatGPT.

Knowledge Check

5

What is the purpose of iterative feedback in the OpenAI Playground app?

- A. To specify the role or persona for the model
- B. To influence the model's behavior through system-level instructions
- C. To gather insights and answer research questions
- D. To refine the model's responses and enhance personalization



Knowledge Check

5

What is the purpose of iterative feedback in the OpenAI Playground app?

- A. To specify the role or persona for the model
- B. To influence the model's behavior through system-level instructions
- C. To gather insights and answer research questions
- D. To refine the model's responses and enhance personalization



The correct answer is **D**

The purpose of iterative feedback in the OpenAI Playground app is to refine the model's responses and enhance personalization.



Thank You!