

Lab: Get Familiar with GenAI Classroom



Estimated Time: 20 mins

Introduction:

Within the Generative AI Classroom, you have the opportunity to delve into the art of prompt engineering. Here, you can actively engage in writing and comparing your prompts, allowing you to refine your skills through real-time chat responses. Additionally, you'll have the option to utilize the GPT-5 Nano model, an upgraded version of OpenAI's language model. This enhanced iteration is specifically designed to significantly enhance its ability in generating text that closely resembles human language while comprehending and adapting to various tasks and situations.

Learning Objectives:

After completing this lab, you should be able to perform the following tasks:

- Develop a working understanding of the GenAI Classroom platform, exploring its features and tools tailored for learning prompt engineering.
- Engage in a conversation with the chatbot, asking various questions to observe how it responds accurately, showcasing the functionality of these prompts.

Please note that generative AI is an evolving field. As you attempt the labs, your experience and output might be different than what is seen here.

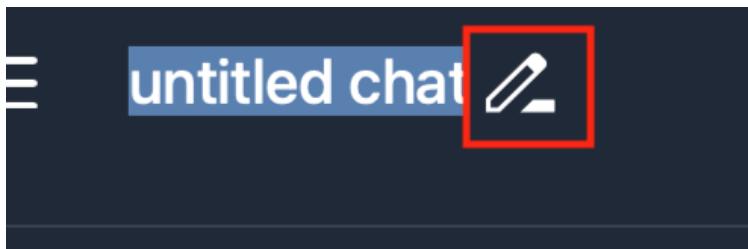
Task 1: Set up your AI Classroom

Within a lab environment, you will have a single-page display featuring both the Generative AI Classroom interface and your instructional content. The Instructions will be positioned on the left-hand side, while the Generative AI Classroom environment will be accessible on the right-hand side of the same page. This layout facilitates simultaneous access to guidance and the interactive learning environment, enhancing convenience and ease of use.

1. The desired appearance of your AI Classroom should reflect this.

A screenshot of the GenAI Classroom interface. At the top, there's a navigation bar with a menu icon, a title 'untitled chat', and a search icon. To the right are buttons for 'New', 'Compare Models' (which is turned off), and other settings. Below the title, a dropdown shows 'Granite 3.2 8B (Reasoning)' selected, with options 'Low cost' and 'Newest'. A 'Chat' button is highlighted in blue, and a 'Freeform' button is shown in grey. The main area has a dark background with light-colored text. It displays 'PROMPT INSTRUCTIONS' with a lightning bolt icon, 'Total Cost 0.00 cents', and 'Total Wait Time 0.00 seconds'. A note at the bottom says 'Higher cost models provide more advanced responses but will consume your available usage more quickly.' Below this is a section titled 'How to use AI Classroom' with four numbered steps: 1. Name the chat, 2. Choose your model(s), You may select multiple models when 'Compare Models' toggle is active, 3. Set the prompt instructions, and 4. Chat with your language model. At the bottom, there's a message input field with placeholder 'Type your message' and a 'Start chat' button. A small callout box says 'Want to elevate your AI learning experience? Check out IBM watsonx.ai now!' and credits 'powered by watsonx'.

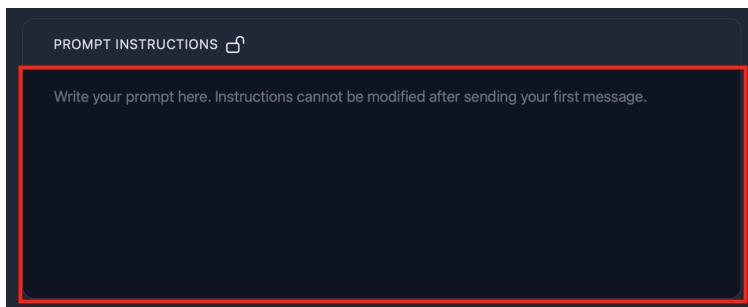
2. **Name the chat:** Utilize the pencil icon found at the top-left corner of the right pane to assign a name to the chat.



3. **Select the model:** Utilize the dropdown menu at the top-right corner of the pane to choose the **GPT-5 Nano** AI model for chat interactions. Here, by default, the model **Granite 3.2 8B (Reasoning)** is selected.



4. **Provide prompt guidance:** Access the Prompt Instructions field located in the upper right pane of the chat system to input specific instructions or contextual details regarding the required queries. Once the chat begins, the prompt will be fixed and cannot be altered thereafter.



5. **Enter your message:** Utilize the text box situated at the bottom of the page to input your question and interact with the chat system.



Once you have entered the **Type your message** field, proceed by clicking the 'Start Chat' button to initiate the conversation.

Task 2: Posing queries to ChatGPT

Once you have configured the AI Classroom, let's move forward and pose some questions to ChatGPT.

1. Please enter your query in the **Type your message** field to request guidance from ChatGPT regarding palindromes.

Question to chatgpt:

“What is a palindrome and how is it defined in terms of string or number sequences?”

▼ Click here to view the sample response generated

A palindrome is a sequence of characters that reads the same forward and backward. This applies to strings (any sequence of characters) or to numbers (the sequence of digits). Formally, a string s of length n is a palindrome if $s[i] = s[n-1-i]$ for all i in $[0, n-1]$.

Palindromes in strings

Definition: A string is a palindrome if it reads identically from left to right and from right to left. By default, character case matters (e.g., 'Radar' is not the same as 'radar').

Palindromes in numbers

Definition: A number is palindromic if the sequence of its digits reads the same forward and backward (e.g., 121, 1331). Negative signs are typically not considered part of the digit sequence, so negative numbers are not palindromes under the common definition.

Common variations

For phrases or sentences, palindromes are often defined after normalizing the input: remove non-alphanumeric characters and convert to a consistent case, e.g., 'A man, a plan, a canal: Panama' becomes 'amanaplanacanalpanama' and is a palindrome.

Examples

- String:'radar' -> palindrome; 'hello' -> not a palindrome.
- Number: 12321 -> palindrome; 12345 -> not a palindrome.
- Phrase (normalized): 'Was it a car or a cat I saw?' -> palindrome when non-alphanumerics are ignored and case is normalized.

Algorithms

Simple approach: reverse the sequence and compare to the original. Efficient approach: use two pointers starting at the ends and move toward the center, comparing characters. For numbers, you can also test palindromicity without converting to a string by reversing half of the digits or by digit-by-digit comparison.

Edge cases

- Empty string and a single character are palindromes.
- For numbers, 0 is a palindrome.
- Negative numbers are not palindromes under the common definition unless the sign is ignored.

2. Please enter your query in the **Type your message** field to seek guidance from ChatGPT about the contrast between JavaScript and Java.

Question to chatgpt:

“What is the primary dissimilarity between JavaScript and Java?”

► Click here to view the sample response generated

3. Please enter your query in the **Type your message** field to request advice from ChatGPT regarding software development methodologies.

Question to chatgpt:

“What are the primary software development methodologies and their key differences?”

► Click here to view the sample response generated

Summary

Throughout this lab, you've delved into the potential of generative AI models for text generation. You've familiarized yourself with IBM's Generative AI classroom chatbot system, driven by multiple language models. You've also gained knowledge on creating desired text outputs using prompts and explored the text generation capabilities inherent in language models.

Congratulations!

You've completed the practical session aimed at acquainting yourself with the GenAi classroom setup and practicing text generation through generative AI.

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