

Hands-on-Lab: Generate Text using Generative AI

Estimated time needed: 15 minutes



Skills
Network

Welcome to the hands-on lab to generate text using generative AI!

What is generative AI?

Generative AI is an advanced technology that understands context based on vast training data. Generative AI models can generate new content based on that contextual understanding and mimic human creative skills. The generative model takes a prompt as input and then processes it to generate new content as output.

In this lab, you will explore the capabilities of generative AI to generate text. You will use IBM's generative AI classroom lab, powered by many language models, to generate the desired output.

Learning objectives

After completing this lab, you will be able to:

- Explore the capabilities of generative AI models to generate text
- Prompt generative AI models to generate the desired content
- Use language models to convert and modify generated text

About generative AI classroom


The generative AI classroom is a tool where you can write and compare your prompts to generate desired text with real-time chat responses. Moreover, you can choose from multiple generative AI models and learn about their strengths and weaknesses.

You will have both the generative AI classroom environment and instructions on one page in a browser. The instructions will be on the left half of the screen, and the generative AI classroom will be on the right half of the screen. You can interact with the language model using the message and chat fields.

Instructions

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untitled chat

Generative AI Classroom

New Compare Models

meta-llama/llama-3-2-1b-instruct

Chat Freeform

PROMPT INSTRUCTIONS

Write your prompt here. Instructions cannot be modified after sending your first message.

How to use AI Classroom

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

4 Chat with your language model

Want to elevate your AI learning experience? Check out IBM watsonx.ai now!

Type your message

Start chat

powered by watsonx

Exercise 1: Text generation for the desired context

In this exercise, you will prompt the generative AI classroom chatbot to generate the desired text and review the generative AI model's text generation capability.

Step 1: Set up the AI classroom

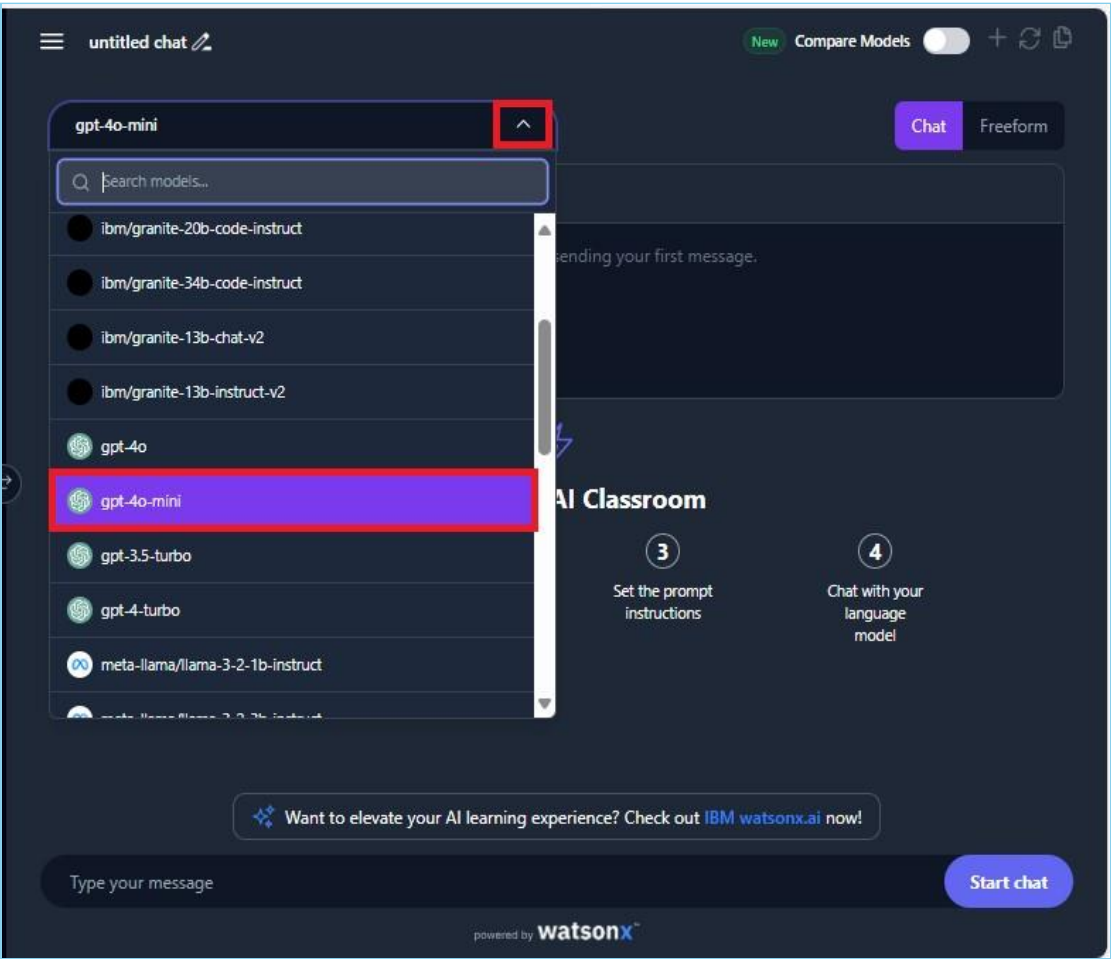
As a first step, you must set up your AI classroom for a better learning experience.

Before beginning the exercise, you must:

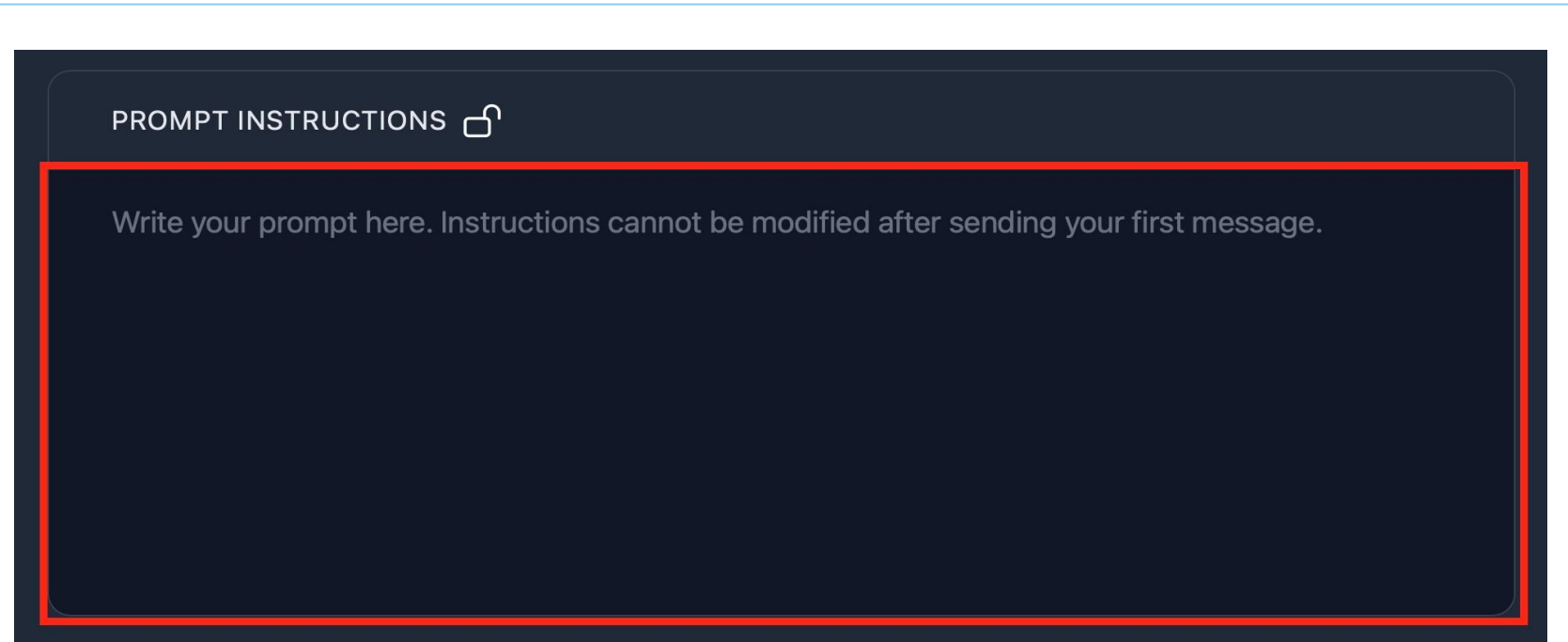
- 1. Name the chat: Use the pencil icon available on the top-left corner of the right pane to name the chat.



- 2. Choose the model: Use the dropdown option from the top-left corner of the right pane for the text generation exercise and choose “gpt-4o-mini” model.



3. Give prompt instructions: Use the **Prompt Instructions** field on the upper right pane of the chat system to provide instructions or any specific details about the context of the required output. These instructions will be locked when you start the chat and cannot be modified later.



The image shows a dark-themed chat interface. At the top, there is a section labeled "PROMPT INSTRUCTIONS" with a lock icon. Below this label is a large, empty text area with a red border. Inside this area, there is a placeholder text that reads: "Write your prompt here. Instructions cannot be modified after sending your first message."

4. Type your message: Use the text box available at the bottom of the page to write the prompts and converse with the chat system.



The image shows the bottom of a chat interface. It features a dark bar with a red border on the left side. Inside this bar, there is a text input field with the placeholder text "Type your message". To the right of the input field is a blue button with the text "Start chat".

Step 2: Text generation for the desired context

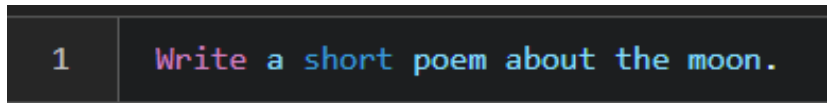
Step 2: Generate text using a text prompt or scenario

Think of a context and draft a statement or prompt for the desired text content you want from the chatbot. For better results, include specifics and details about the context of the required output.

1. Write your prompt or statement in the **Type your message** field at the bottom of the screen.

For example,

Write a short poem about the moon.



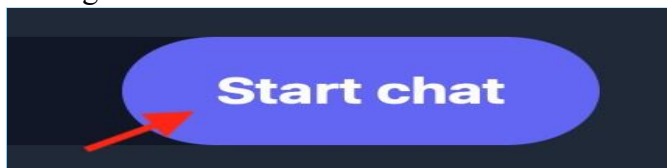
You can copy the above example using the copy icon on the right side of the box.

Write a short poem about the moon.

Start chat 

Note: Ignore the prompt instructions field for easy understanding and a quick start. You can include additional information or instructions about the context of the required output along with your prompt in the type your message field.

2. Now, click **Start chat** to send the message to the chatbot.



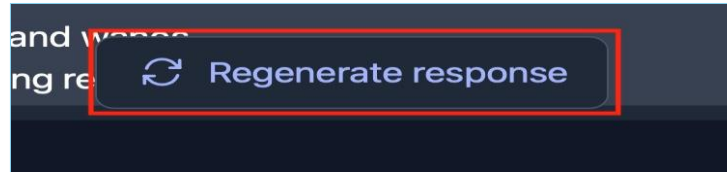
3. You will see the textual response with the desired content in the middle pane on the right side of the screen.

Write a short poem about the moon.

In the velvet sky, the moonlight glows,
A silver orb where the night wind blows.
Whispers of dreams on its gentle beams,
Guiding lost souls through their midnight themes.

With craters deep and a tranquil face,
It dances softly in the starry space.
A beacon of hope in the darkened night,
The moon, our companion, a wondrous sight.

4. If you are unsatisfied with the response, click **Regenerate response**, and the chat system will show a revised response for your original prompt.



5. You can copy and paste the generated output and tweak it further as required.

Step 3: Text conversion for the desired context

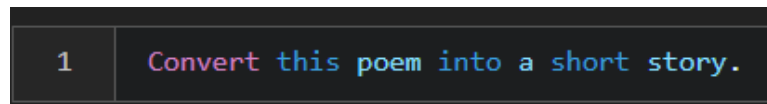
Step 3: Convert generated text into different text formats

You can also test the conversational capabilities of the language model.

1. Continue with the same Step 2 example in the same chat window.
2. Enter the additional prompt in the **Start chat** field to convert the generated text into a different text format.

For example,

Convert this poem into a short story.



You can copy the above example using the copy icon on the right side of the box.

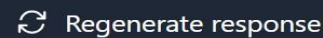
3. The chat system will generate another format of the originally generated response.

Convert this poem into a short story.

In a quiet town where the stars twinkled like diamonds, the night sky was a canvas of deep velvet, and the moon hung like a silver orb, casting its gentle glow over the world below. Each evening, as darkness fell, the townsfolk would step outside, drawn to the moonlight that danced upon the rooftops and whispered secrets to the night wind.

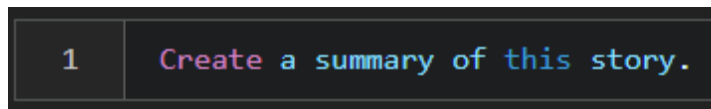
Among them was a young girl named Lila, who often found solace under the moon's watchful gaze. She believed that the moon held the dreams of all who gazed upon it, and she would spend hours lying in the grass, staring up at its tranquil face. To her, it was more than just a celestial body; it was a companion that guided her through her thoughts and fears.

One night, as Lila lay beneath the moonlight, she felt a pull, as if the moon were beckoning her closer. With a heart full of wonder, she closed her eyes and let her thoughts drift away, carrying her through the starry expanse,



4. You can delve deeper into the response and enter the additional prompt in the **Start chat** field to test generative AI's conversational abilities. For example,

Create a summary of this story.



You can copy the above example using the copy icon on the right side of the box.

5. The chat system will respond to your additional message(s) based on already generated responses.

Create a summary of this story.

In a quiet town, a young girl named Lila finds solace under the moon's gentle glow, believing it holds the dreams of those who gaze upon it. One night, she feels a pull from the moon and imagines herself soaring through the starry sky, where she meets the moon and hears its whispers of ancient tales and wisdom. This experience fills her with hope and comfort, reminding her that even in darkness, there is beauty and light. From then on, Lila carries the moon's lessons in her heart, embracing her dreams and the wonder of the world, forever grateful for the magic of the night.

If you enjoyed this summary, you might want to delve deeper into the themes of connection between humans and nature in literature, or explore how different cultures interpret the moon's significance in their stories and traditions. Writing your own summaries or



Regenerate response

also enhance your appreciation for

Note: You can continue interacting with the chatbot to dive further as long as you like or require.

Step 4: Try yourself

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1. Now, you must try to generate textual responses for various contexts from the language model.


For example,

a. Tell me a fun fact about space.

1

a. Tell me a fun fact about space.

Tell me a fun fact about space.



Did you know that a day on Venus is longer than a year on Venus? It takes about 243 Earth days for Venus to complete one rotation on its axis, but only about 225 Earth days to orbit the Sun!


1.24 seconds

b. Explain how a bicycle works.

1

b. Explain how a bicycle works.

Explain how a bicycle works.



A bicycle works through a combination of mechanical components that work together to enable movement. Here's a basic overview of how it functions:

Frame: The bicycle frame is the main structure that supports all other components. It provides stability and is typically made of materials like steel, aluminum, or carbon fiber.

Wheels: Bicycles have two wheels that are essential for movement. Each wheel consists of a hub, spokes, and a rim. The tires provide traction and cushioning.

Pedals and Crankset: The cyclist powers the bicycle by pushing down on the pedals. The pedals are connected to the crankset, which converts the circular motion of the pedals into rotational motion.

Chain and Gearing: The crankset is connected to a chain that runs over gears (sprockets) on the rear wheel. When the pedals turn, the chain moves, turning the rear wheel and propelling the bicycle forward. Gears allow the cyclist to adjust the difficulty of pedaling, making it easier to climb hills or go faster on flat terrain.

Brakes: Bicycles are equipped with brakes that allow the rider to slow down or stop. Common types include rim brakes, which clamp down on the wheel rim, and disc brakes, which use a rotor mounted on the wheel hub.

Steering: The handlebars are connected to the front fork, which holds the front wheel. By turning the handlebars, the rider can steer the bicycle in different directions.

Suspension (optional): Some bicycles, especially mountain bikes, have suspension systems that absorb shocks from rough terrain, providing a smoother ride.

When a rider pedals, the energy is transferred through the chain to the rear wheel, causing it to turn and move the bicycle forward. The combination of pedaling, steering, and braking allows for

c. What are three famous poems written by William Wordsworth?

1

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What are three famous poems written by William Wordsworth?



Three famous poems written by William Wordsworth are:

"I Wandered Lonely as a Cloud" - Often referred to as "Daffodils," this poem reflects on the beauty of nature and the joy it brings to the human spirit.

"Tintern Abbey" - Formally titled "Lines Composed a Few Miles Above Tintern Abbey," this poem explores the relationship between nature and memory, as well as the passage of time.

"The Prelude" - An autobiographical poem that details Wordsworth's early life and his development as a poet, it is considered one of his major works and a cornerstone of Romantic literature.

d. Create a marketing campaign for a retail fashion brand.

1

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Create a marketing campaign for a retail fashion brand.



Marketing Campaign for Retail Fashion Brand: "Style Your Story"

Campaign Overview: The "Style Your Story" campaign aims to connect with consumers on a personal level, encouraging them to express their individuality through fashion. The campaign will highlight the brand's diverse range of clothing and accessories, showcasing how each piece can help tell a unique story.

Target Audience:

Age: 18-35

Gender: All genders

Interests: Fashion, self-expression, sustainability, social media

Location: Urban areas with a strong fashion culture

Campaign Elements:

Social Media Launch:

Hashtag: #StyleYourStory

Encourage customers to share their outfits and stories on platforms like Instagram, TikTok, and Facebook using the campaign hashtag.

e. Help me draft a job description for the role of Instructional Designer.

1

e. Help me draft a job description for the role of Instructional Designer.

Help me draft a job description for the role of Instructional Designer.



Job Title: Instructional Designer

Location: [Insert Location]

Job Type: [Full-Time/Part-Time/Contract]

Department: [Insert Department]

Reports To: [Insert Job Title of Supervisor]

Job Summary:

We are seeking a skilled and creative Instructional Designer to join our team. The ideal candidate will be responsible for developing engaging and effective educational programs and materials that enhance the learning experience. The Instructional Designer will collaborate with subject matter experts and stakeholders to analyze learning needs, design instructional strategies, and evaluate the effectiveness of training programs.

Key Responsibilities:

Needs Analysis:

Conduct assessments to identify learning needs and gaps within the organization.

Collaborate with stakeholders to gather requirements and understand target audience characteristics.

Curriculum Development:

Design and develop instructional materials, including e-learning modules, instructor-led training, and job aids.

Create engaging content that incorporates multimedia elements, such as videos, graphics, and interactive activities.

Instructional Strategies:

Apply instructional design principles and learning theories to create effective learning experiences.

Develop assessment tools to measure learner progress and program effectiveness.

Collaboration:

Work closely with subject matter experts to ensure content accuracy and relevance.

Collaborate with technology teams to integrate learning management systems and other educational technologies.

Evaluation and Improvement:

Collect and analyze feedback from participants to continuously improve instructional materials and delivery methods.

Stay updated on industry trends and best practices in instructional design and adult learning.

Project Management:

Note: You must validate the responses generated through the chat system for factual accuracy and use the technology ethically and responsibly.

Conclusion

Congratulations! You just completed the hands-on lab to generate text using generative AI.

In this lab, you explored the capabilities of generative AI models to generate text. You learned about IBM's Generative AI classroom chatbot system powered by many language models. You learned how to generate the desired text using prompts and reviewed the text generation capabilities of language models.

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