Hands-on Lab: Text Generation in Action

Estimated time needed: 30 minutes

Welcome to the hands-on lab text generation in action!

What is text generation in generative AI?

Generative AI's greatest potential is to generate context-based and captivating content, leading to limitless possibilities for intelligent text generation.

Generative AI-powered models and tools can be used to generate a wide range of text formats, such as articles, blog posts, social media posts, product descriptions, marketing copy, language translation, conversational interactions, and image descriptions, among many more.

In this lab, you will look at the two most popular text generation tools, OpenAI's ChatGPT and Google's Gemini and explore how to use them for text generation and text summarization.

Learning Objectives

After completing this lab, you will be able to:

- Explore the text generation capability of generative AI
- Write emails using ChatGPT
- Convert the unit measurement using ChatGPT
- Summarize text using Google's Gemini

ChatGPT overview

ChatGPT is an AI chatbot of OpenAI based on GPT's large language models. Generative AI technology understands your natural language prompt and then uses the context to build the response and generate the output.

Exercise 1: Write an email using OpenAI's ChatGPT

Writing an effective email for the required subject and context requires cognitive attention, as you must consider the affirmative language, response aligned with the trail mail, grammar, and so on.
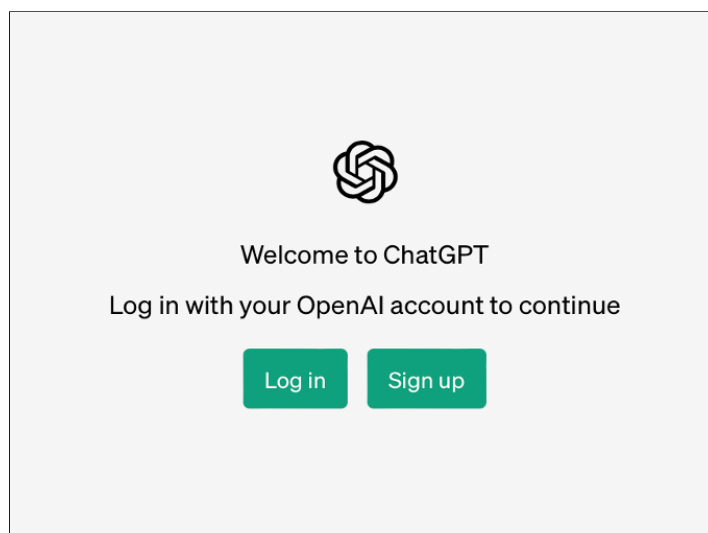
Step 1: Log in steps and the home page

1. Launch ChatGPT and sign in.

   Note: If you cannot access ChatGPT by clicking on the link, copy the followingh URL and paste it into a browser.

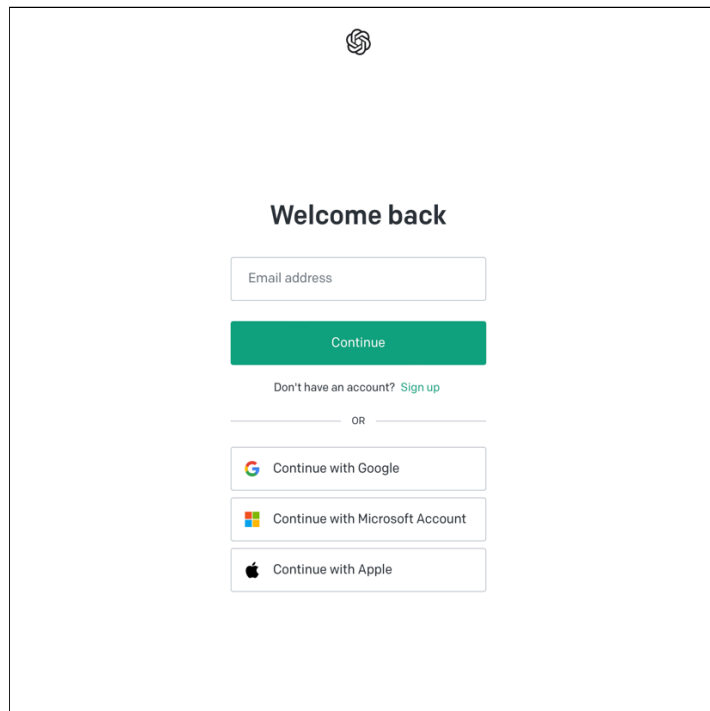   `https://chat.openai.com/`

2. Once launched, you must sign up or login.

   Note: You can create a free account on ChatGPT and use GPT-3.5 features for free.
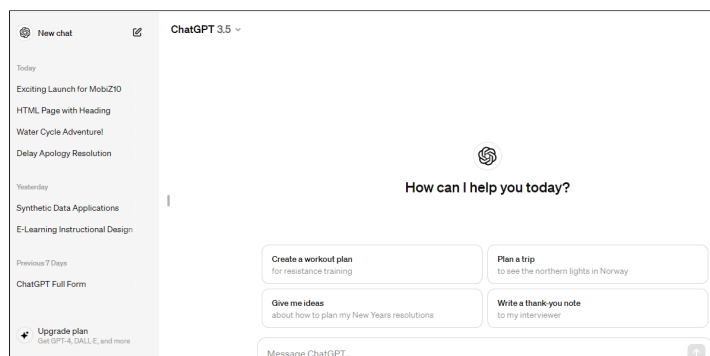
a. To sign up, you will be required to enter your email ID and password. You will receive an automated verification email. After you click verification, you will need to enter your personal details and follow the steps to complete the sign up on your first login.

b. After sign up, you will reach the login page, as shown below.

3. After login, you will view the OpenAI chatbot platform, ChatGPT, as shown below.
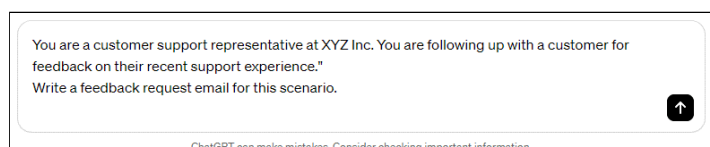

Step 2: Generate the email using a prompt

1. Consider a context for your desired email requirement.

2. Write the prompt or statement in the **send a message** field at the bottom of the ChatGPT screen.
For example,

```
"You are a customer support representative at XYZ Inc. You are following up with a customer for feedback on their recent support experience." Wr
```

Note: For better results, include specific details about the subject and context of the required email.

3. Now, click the arrow sign or press the enter key to send the message to the chatbot.

4. You will receive the textual response from ChatGPT for the desired scenario, as shown below.

5. You can validate the content per the context, copy the generated email, and update the details as required.

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

   Note: You can continue to interact with the ChatGPT to dive deeper and further as long as you like or require.

Step 3: Try yourself

Now, you must try generating emails for different scenarios using ChatGPT to explore the text generation capabilities of generative AI models and tools.

For example,

1. Email your professor to request for a meeting
2. Write an email to follow up on a job application
3. Send out an internal invitation to all your employees for a company event
4. Email your team reminding them about delays on a regular project update
5. Email your customers announcing your new product launch

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

Exercise 2: Convert a unit measurement using ChatGPT

Testing ChatGPT's computational abilities are essential for practicality, education, problem-solving, convenience, versatility, proof of concept, and user engagement. It ensures the AI can effectively perform tasks like math, unit conversion, and problem-solving, making it more valuable in real-world applications and building user trust.

Step 1: Log in steps and the home page

1. Click ChatGPT to launch it.
   Note: If you cannot access ChatGPT by clicking on the link, copy the following URL and paste it into a browser.

   ```
   https://chat.openai.com/
   ```

2. Since you are already logged in, you can view the homepage of OpenAI's chatbot platform, ChatGPT, as shown below.

Step 2: Convert the unit measurement

1. Consider a context to convert one unit measurement into another.

2. Write the prompt or statement in the **send a message** field at the bottom of the ChatGPT screen.
For example,

```
"You have a recipe that shows 500 grams of flour, but your kitchen scale measures in ounces. You need to convert the weight of flour from grams
Convert 500 grams to ounces and provide the result based on the appropriate conversion factor.
```
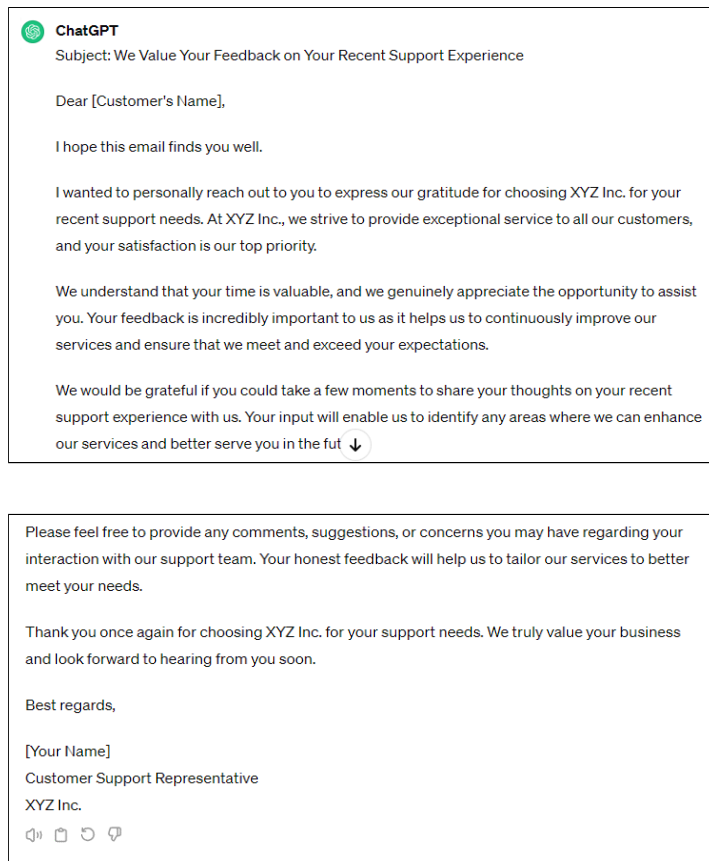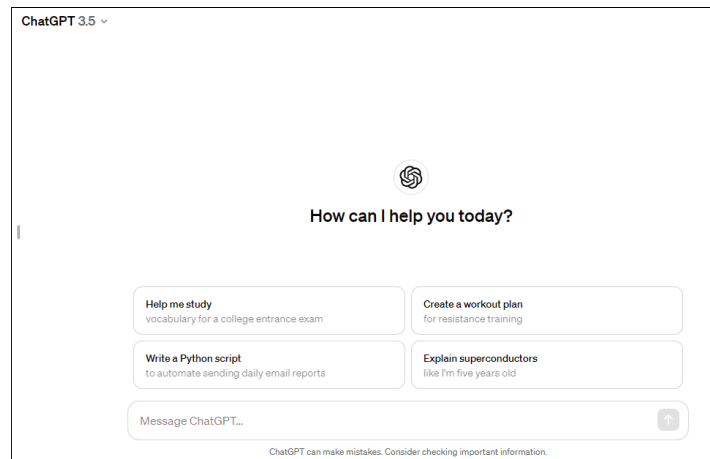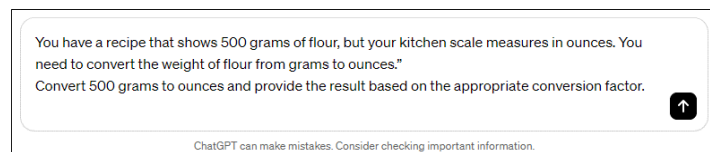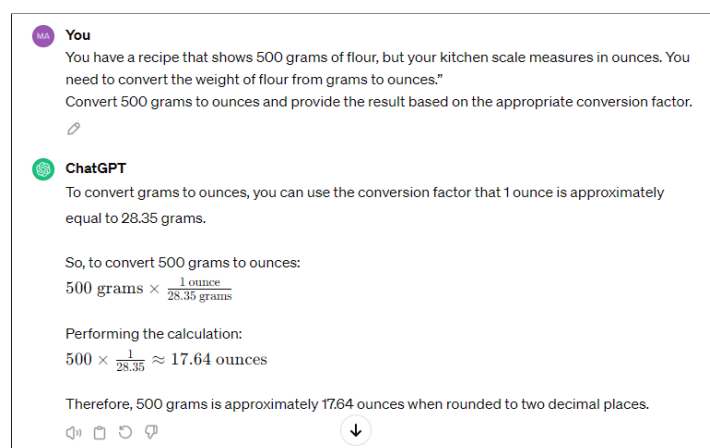
Note: For better results, include specific details about the subject and context of the required computation.

3. Now, click the arrow sign or press the enter key to send the message to the chatbot.

4. You will receive the textual response from ChatGPT for the desired scenario, as shown below.

5. You can validate the content per the context, copy the generated response, and use the details as required.

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

Note: You can continue to interact with the ChatGPT to dive deeper and further as long as you like or require.

Step 3: Try yourself

Now, you must try different prompts to test the computational capabilities of ChatGPT for different scenarios.
For example,

1. Find the area of a triangle
2. Calculate the average of five random numbers
3. Compute the simple interest for a principal amount and rate of interest

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

[Optional] Exercise: Summarize text using Google's Gemini

Gemini may not be available in all countries, so this exercise is optional.

Summarization is vital to drawing meaningful and crisp information from long textual components. This helps focus on the relevant parts and eliminate irrelevant or less important text. Writing a summary of long paragraphs or documents can be a time-consuming process. Based on NLP algorithms, generative AI's LLMs simplify text summarization for you. It speeds up the text summarization of long texts and documents and includes key points and context from the source text.

In this exercise, you will examine the text summarization capability of generative AI using Gemini.

What is Gemini?

Gemini is a conversational generative AI service that generates various text formats. It is a collaboration tool that harnesses the power of the web. Powered by Google's advanced language models, PaLM, short for Pathways Language Model, pulls information from knowledge across the internet to respond to prompts.

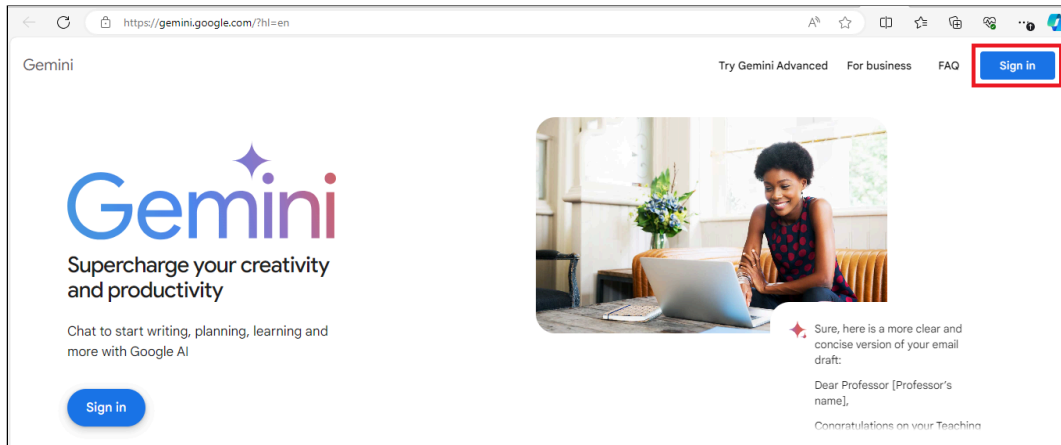**Step 1: Log in steps and the home page**

1. Click Gemini to launch it.
   Note: If you cannot access Gemini by clicking on the link, copy the following URL and paste it into a browser.
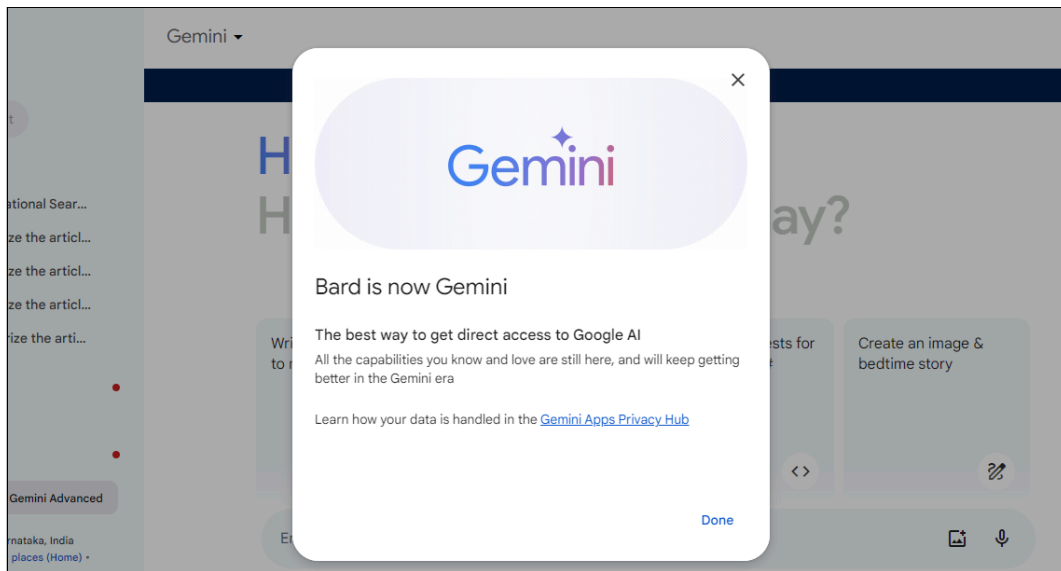
   `https://gemini.google.com/?hl=en`
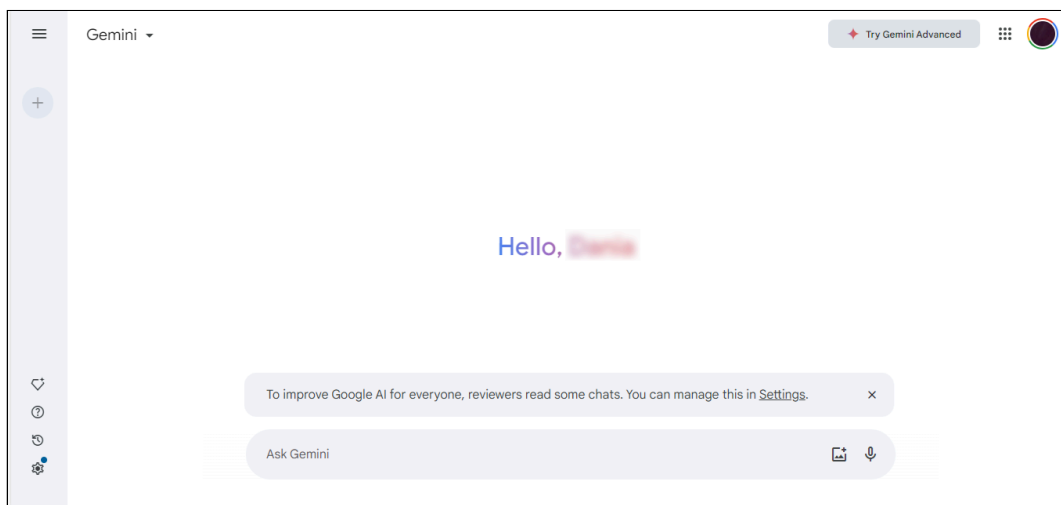
2. Once launched, you must sign up or login.

   Note: You can use your existing Gmail account or create a free account on Gemini.

a. To sign up, you must enter your Gmail ID and password. You will receive an automated email confirming your Gemini account.

b. After signing up or log in, you should see this pop-up, click done.
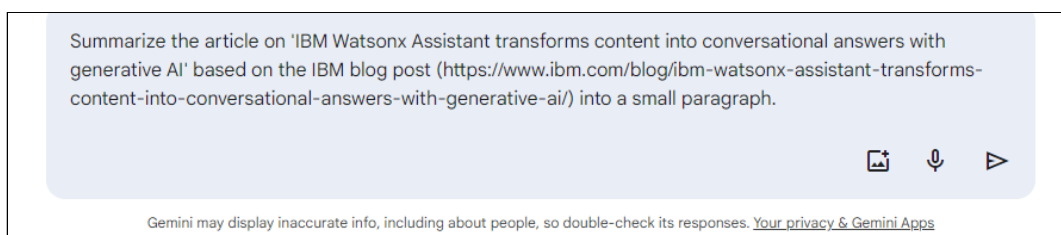
c. You will now reach the home page, as shown below.
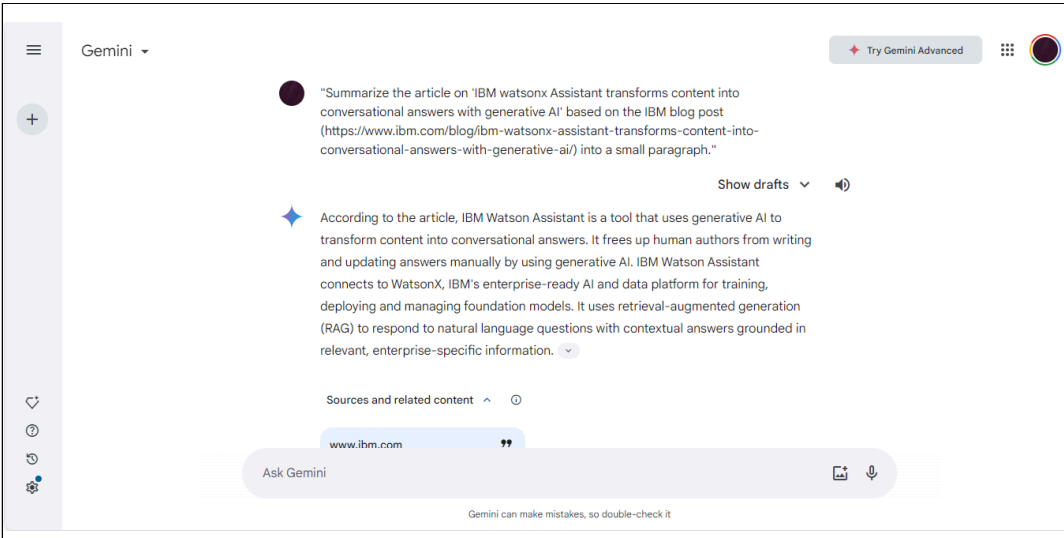

Step 2: Summarize the text using Gemini

1. Consider a scenario or context for the desired text summarization requirement.

2. Write the prompt or statement in the **Enter a prompt here** field at the bottom of the screen.
   For example,

   `"Summarize the article on 'IBM watsonx Assistant transforms content into conversational answers with generative AI' based on the IBM blog post (`
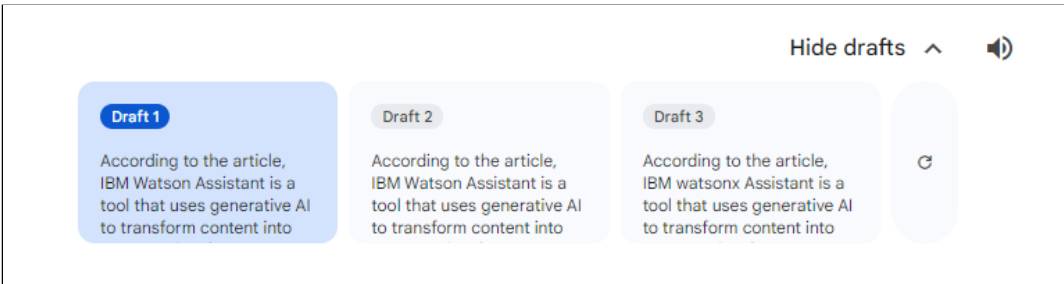
   Note: For better results, include specific details about the subject and context of the required text.
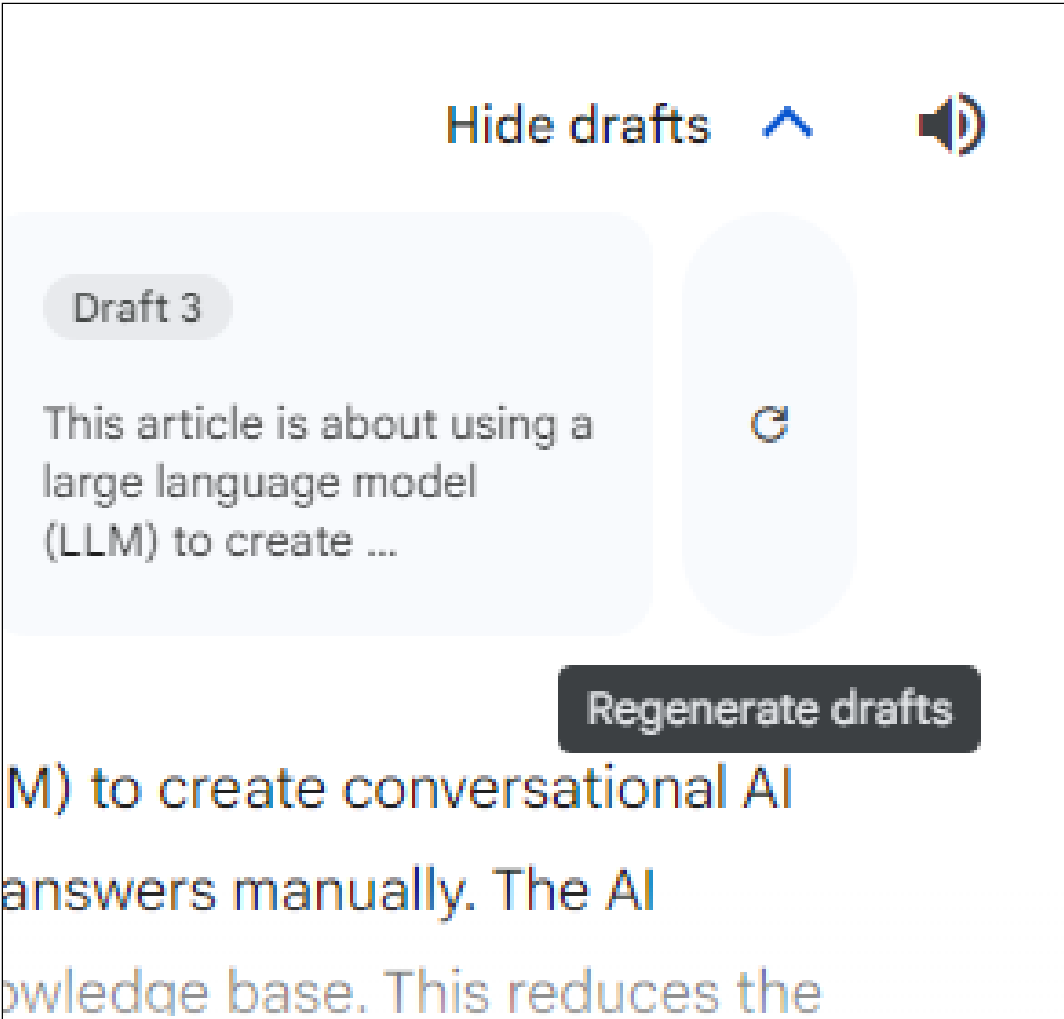

3. Now, click the arrow sign or press the enter key to send the message to the chatbot.

4. You will receive the textual response from Gemini for the desired article or text summarization prompt, similar to the screenshot shown below.

5. Gemini generates additional drafts for your prompt. You can review all drafts and select the best result for your requirements, similar to the screenshot shown below.
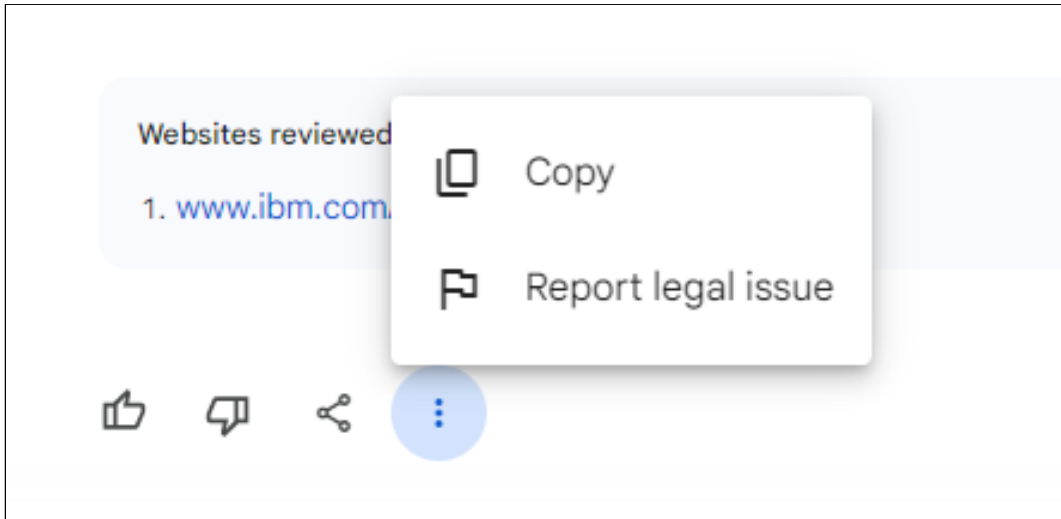

6. If you are unsatisfied with the response, click **regenerate drafts**, and Gemini will share revised draft responses for your original prompt.
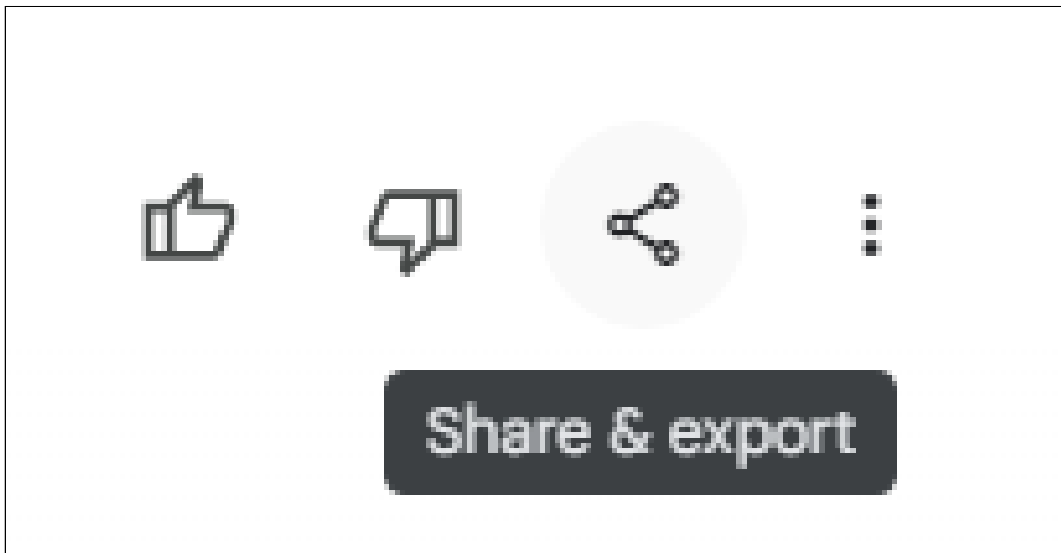
7. You can use the generated output and tweak it further.

a. You can copy the generated text to share or reuse, as shown in the screenshot below.

b. You can directly share or export the Gemini response, as shown in the screenshot below.

8. You must validate the content per context and use the generated text summary as required.

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

Step 3: Try yourself

Using Gemini, you must try text summarization for different types of content: articles, blogs, research papers, or research reports.

Summary:

Congratulations! You just completed the hands-on lab text generation in action.

In this lab, you explored the text generation capabilities of generative AI using LLMs. You learned how to write an email using ChatGPT's assistance. You explored the computational abilities of generative AI's language model by converting the unit measurement. You also learned how to summarize text using Gemini for a given article or document.