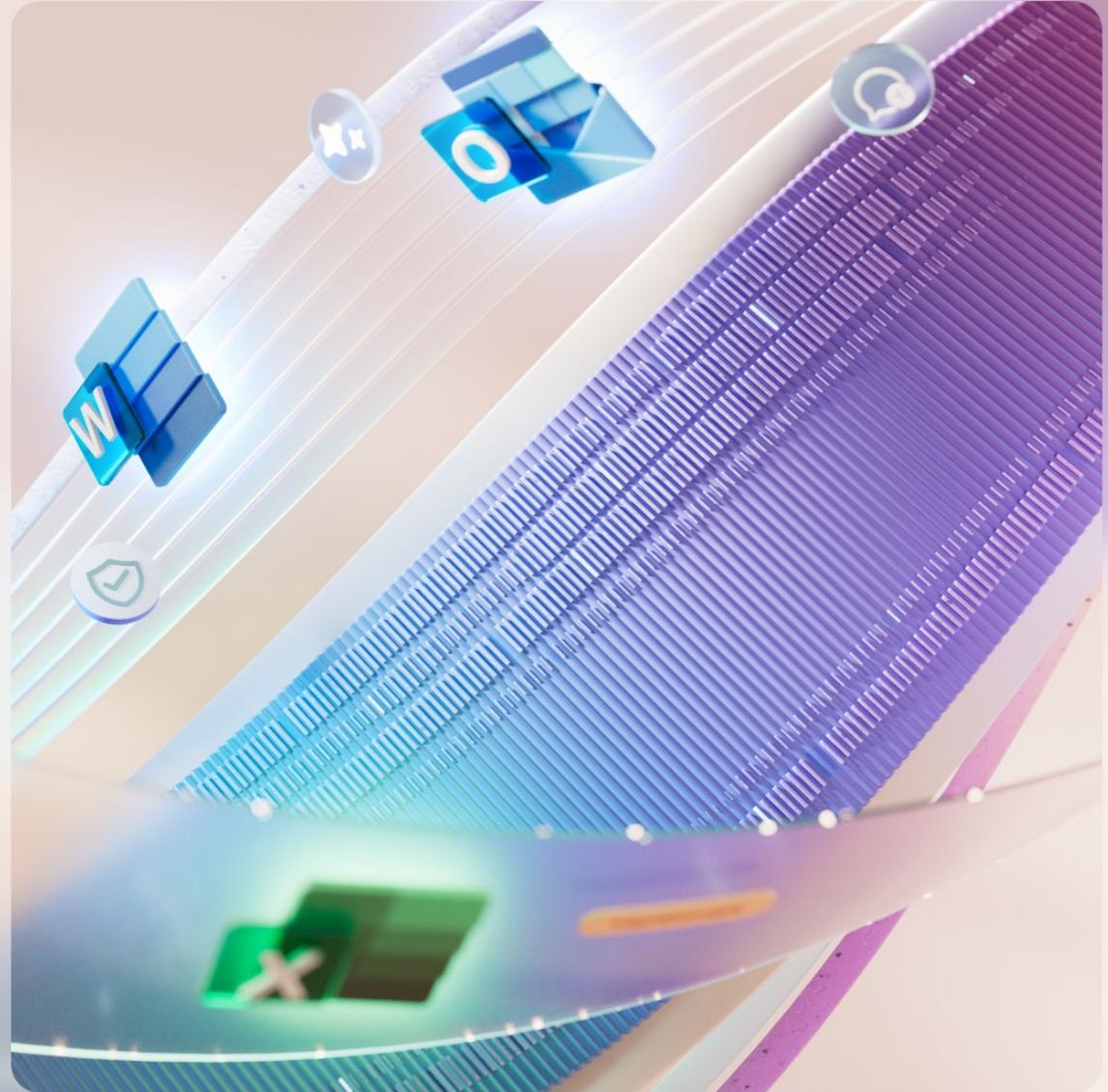




The art of prompt engineering: From basic to advanced techniques

Content by David Moore.
Originally presented in August 2024 as part of the
Camp Copilot trainings series at Microsoft.



Agenda:



What is prompt engineering?



Elements of a prompt



Use Copilot to create prompts



Confirmation prompts

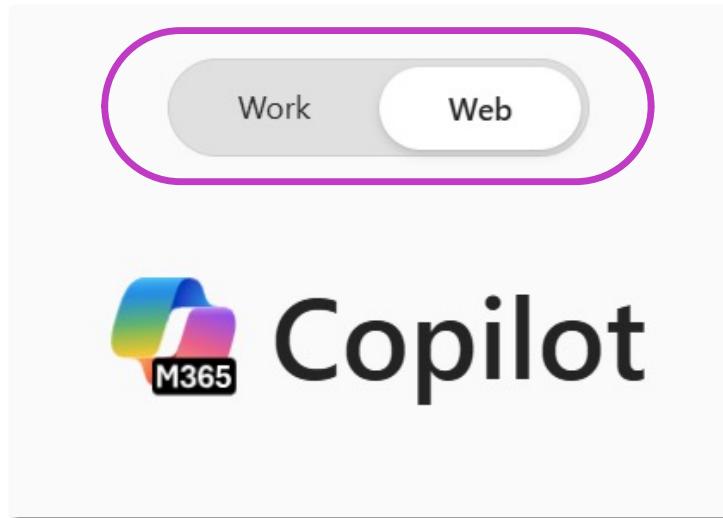


Teaching Copilot

This presentation explores the elements that can go into a well-crafted prompt. These concepts are demonstrated using prompts to create images. The same technique can be used to create prompts that work with all copilot interfaces.

All images in this presentation are generated using microsoft copilot.

Notes about prompts shown in this presentation



All prompts shown in this presentation were used from Edge at **copilot.microsoft.com** in Web mode.

What is Prompt Engineering?

- Prompt engineering is the art and science of **crafting effective inputs** for Large Language Model (LLM) systems such as Copilot.
- A prompt is a **piece of text** that instructs the Copilot system on what kind of output to produce. There **may be optional data** included with the prompt. The **data may be text, a document, a URL, an audio, or even an image.**
- Prompt engineering is a form of human-in-the-loop interaction with Copilot, where **you provide some guidance or constraints** to the system through the prompt, and the system generates an output (may be text, an image, audio, or video) based on the prompt.
- **A well-designed prompt can elicit high-quality, relevant, and diverse responses** from the LLM system, while a poorly-designed prompt can result in low-quality, irrelevant, or repetitive outputs.



The elements of a prompt

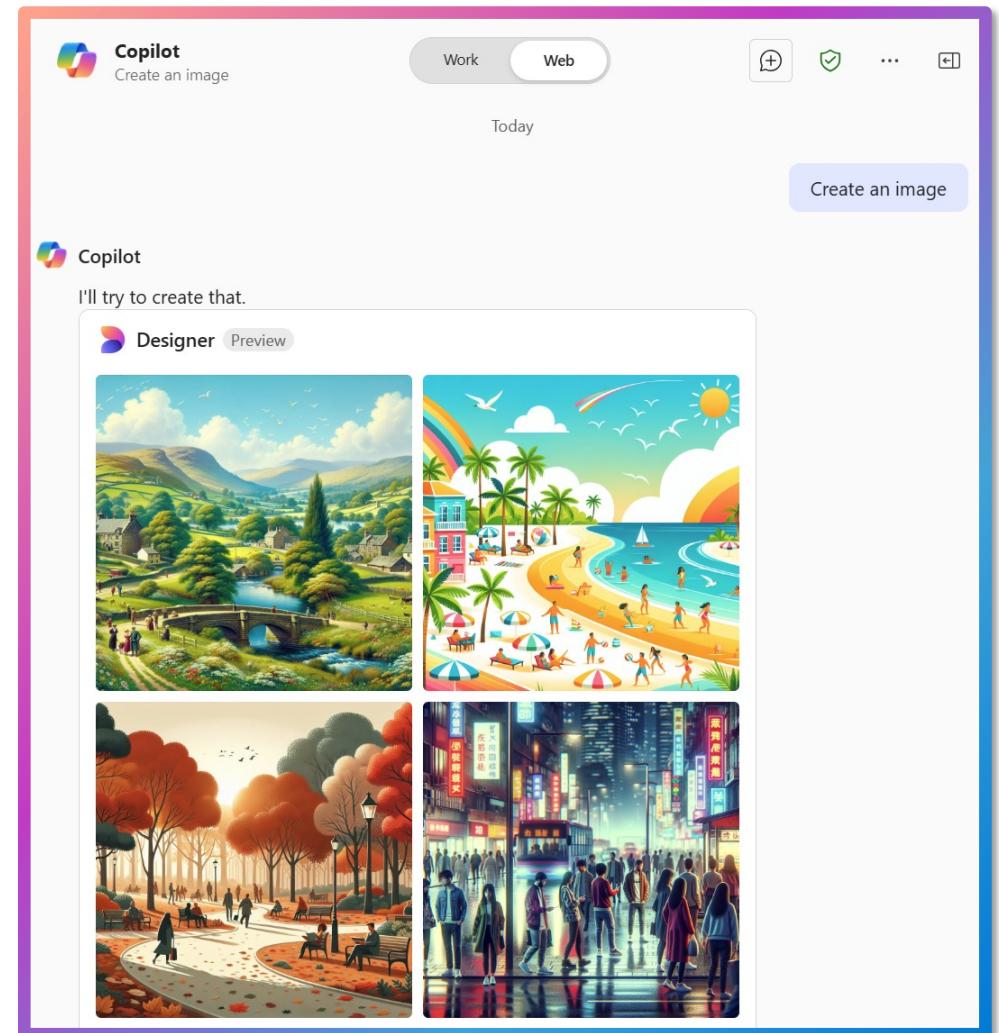
All the images in this presentation are generated using Microsoft copilot. Prompts available within.

Set the task

Prompt: *Create an image*

This prompt has one simple element:

- **Task:** This is an image creation task with no other instructions or constraints.



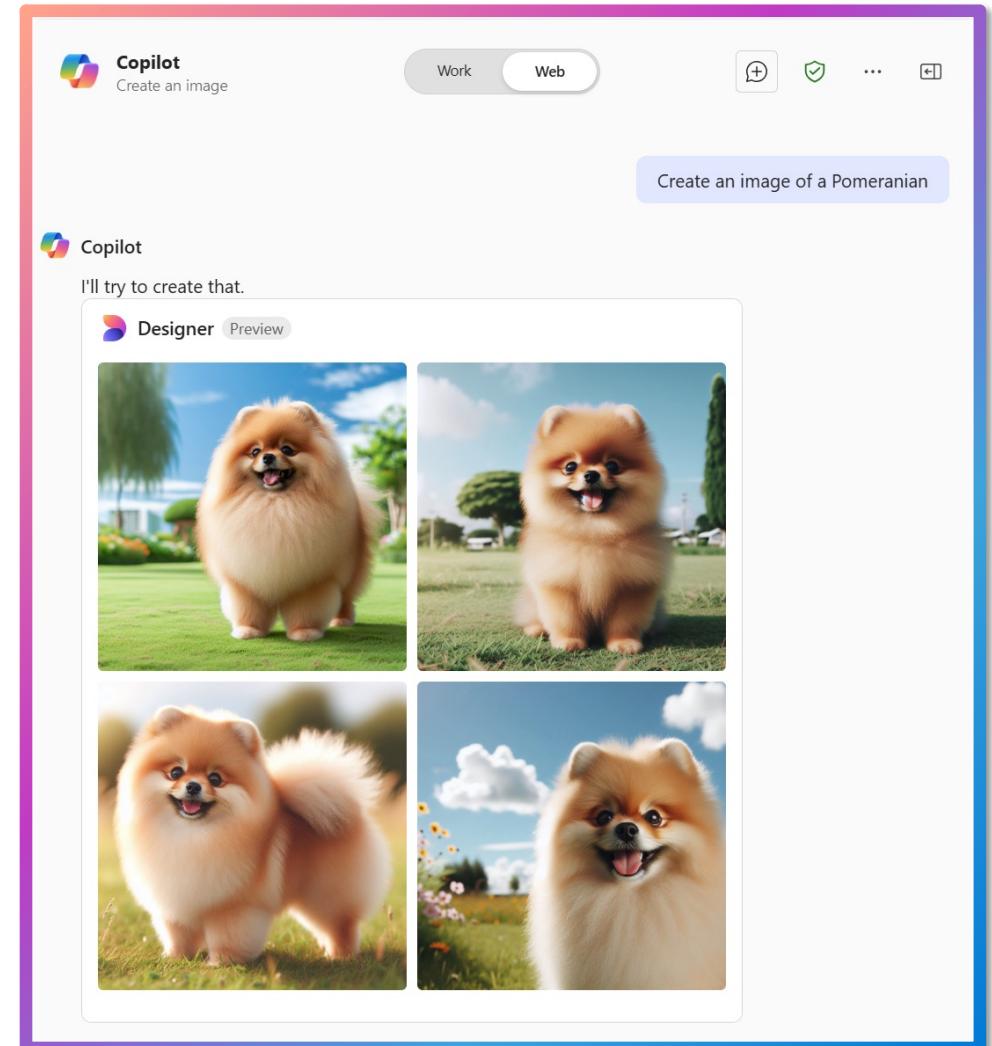
All the images in this presentation are generated using Microsoft copilot. Prompts available within.

Add constraints

Prompt: *Create an image of a Pomeranian*

This prompt has **two** simple elements:

- **Task:** This is an image creation task.
- **Constraint:** Include a specific dog breed.



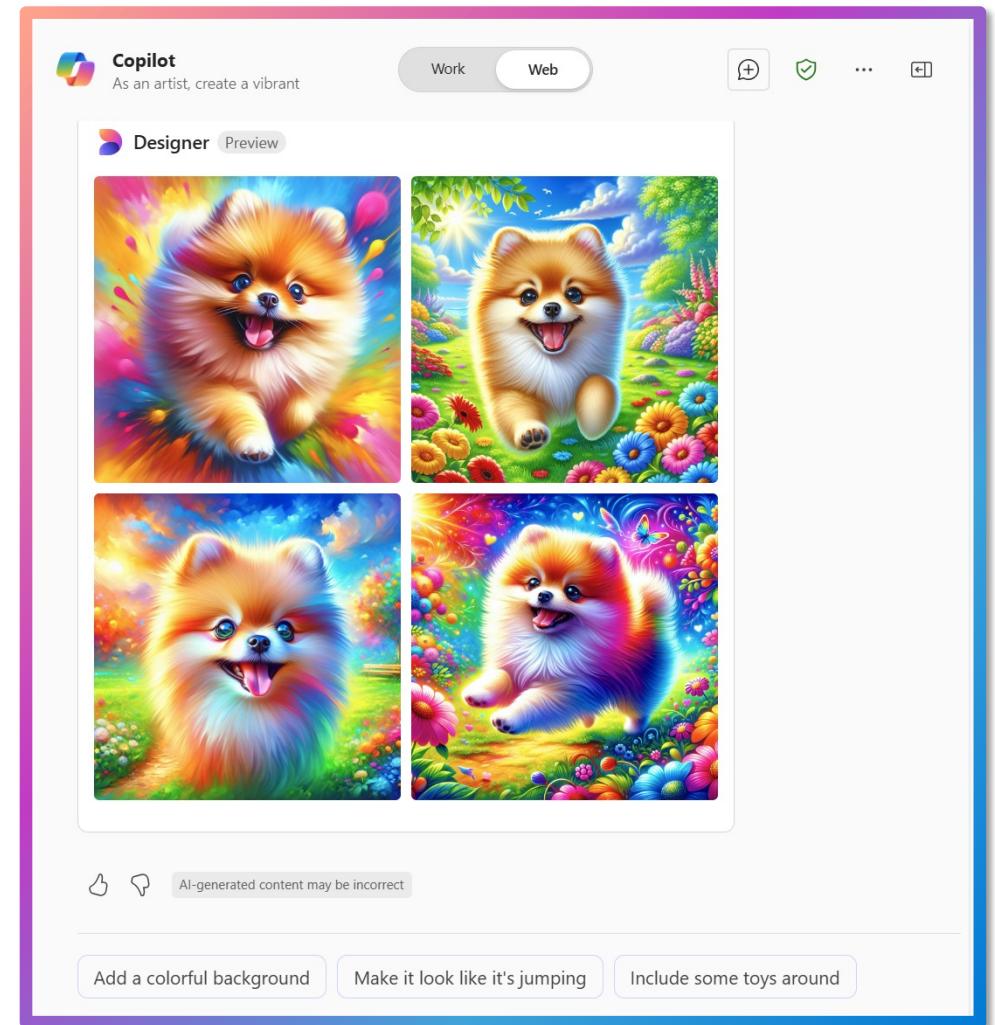
All the images in this presentation are generated using Microsoft copilot. Prompts available within.

Add elements

Prompt: *As an artist, create a vibrant digital painting of a playful Pomeranian.*

Elements:

- **Tone:** The tone is more descriptive and expressive.
- **Role:** The role is specifically specified “as an artist”.



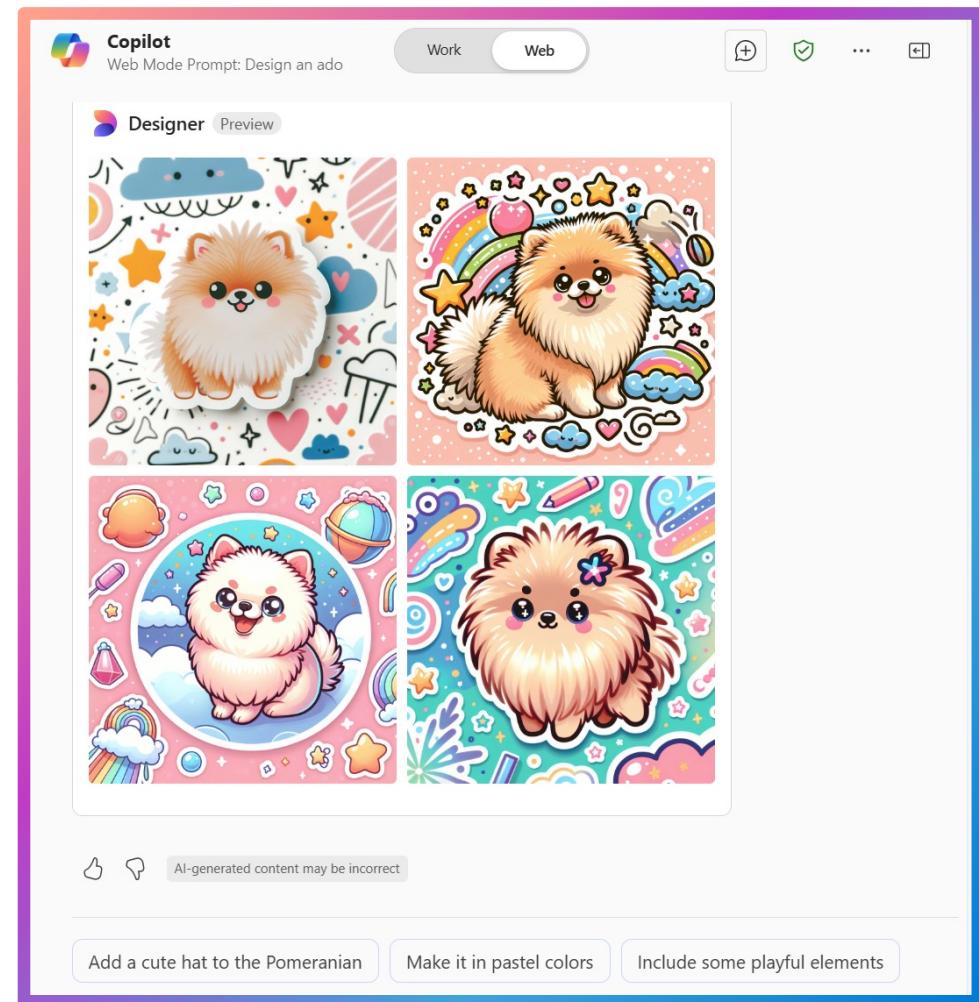
All the images in this presentation are generated using Microsoft copilot. Prompts available within.

Add elements, Pt 1

Prompt: *Design an adorable Pomeranian sticker with a whimsical background.*

Elements:

- **Format:** The format is now a sticker design.
- **Task specification:** The task specifies both the subject (Pomeranian) and the context (whimsical background).



All the images in this presentation are generated using Microsoft copilot. Prompts available within.

Add style elements

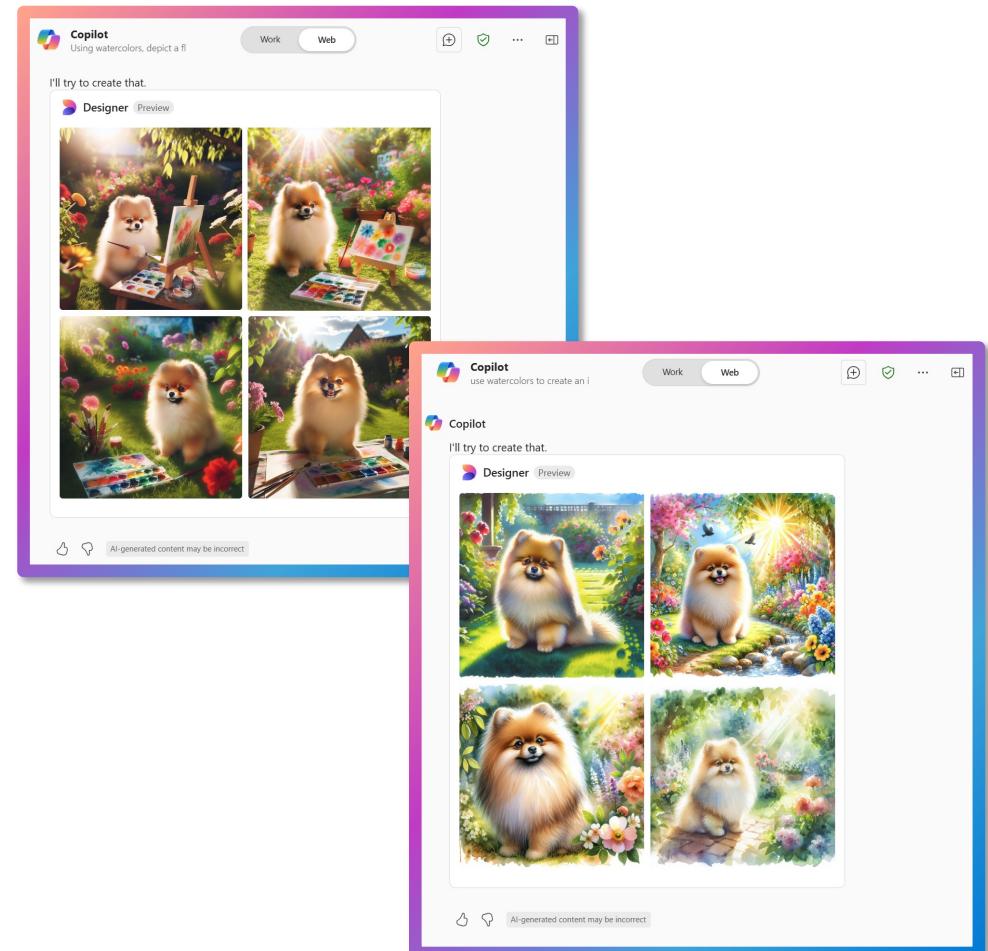
Prompt: Using watercolors, depict a fluffy Pomeranian sitting in a sunlit garden.

Or

Use watercolors to create an image of a fluffy Pomeranian sitting in a sunlit garden.

Elements:

- **Style:** The type of image is now a watercolor.
- **Importance of order:** The most critical instructions (directing medium, subject, setting) come last.



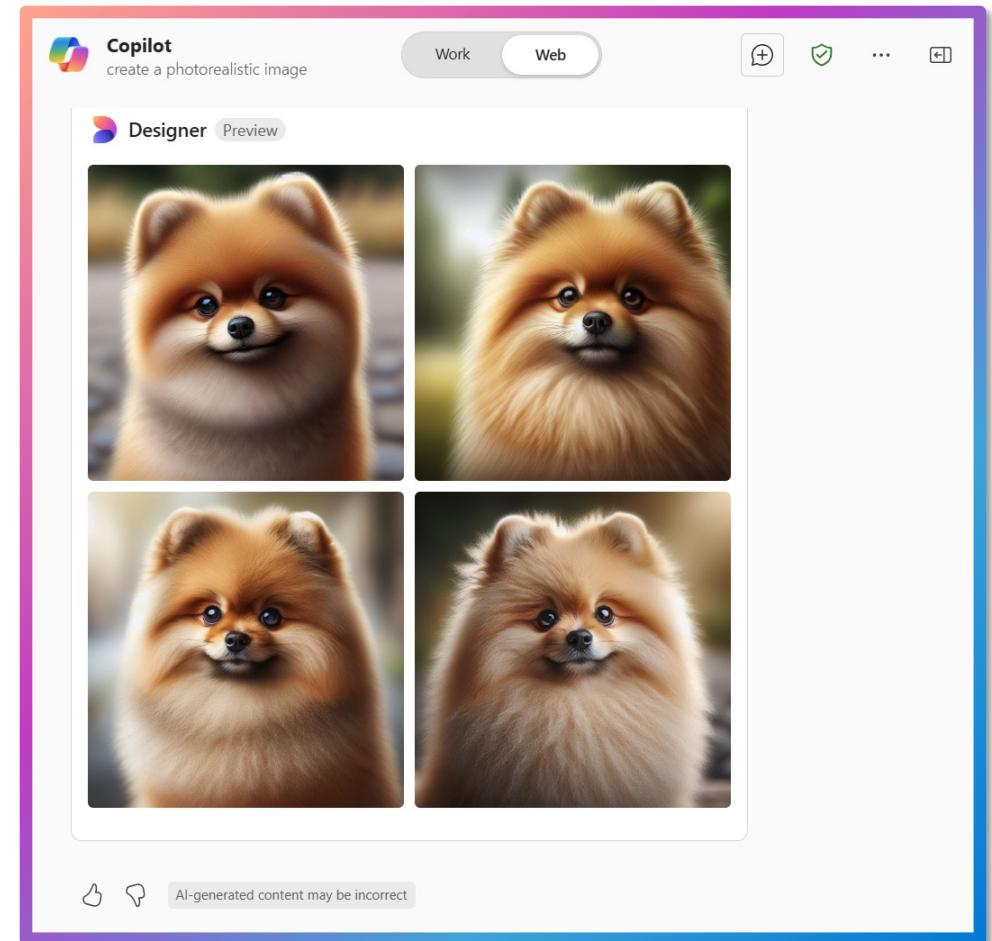
All the images in this presentation are generated using Microsoft copilot. Prompts available within.

Add complexity

Prompt: *Craft a lifelike digital portrait of a Pomeranian, capturing its expressive eyes and fur texture.*

Elements:

- **Complexity:** The prompt now includes specific features (eyes, fur texture).
- **Details:** The focus is on realism and capturing specific aspects.



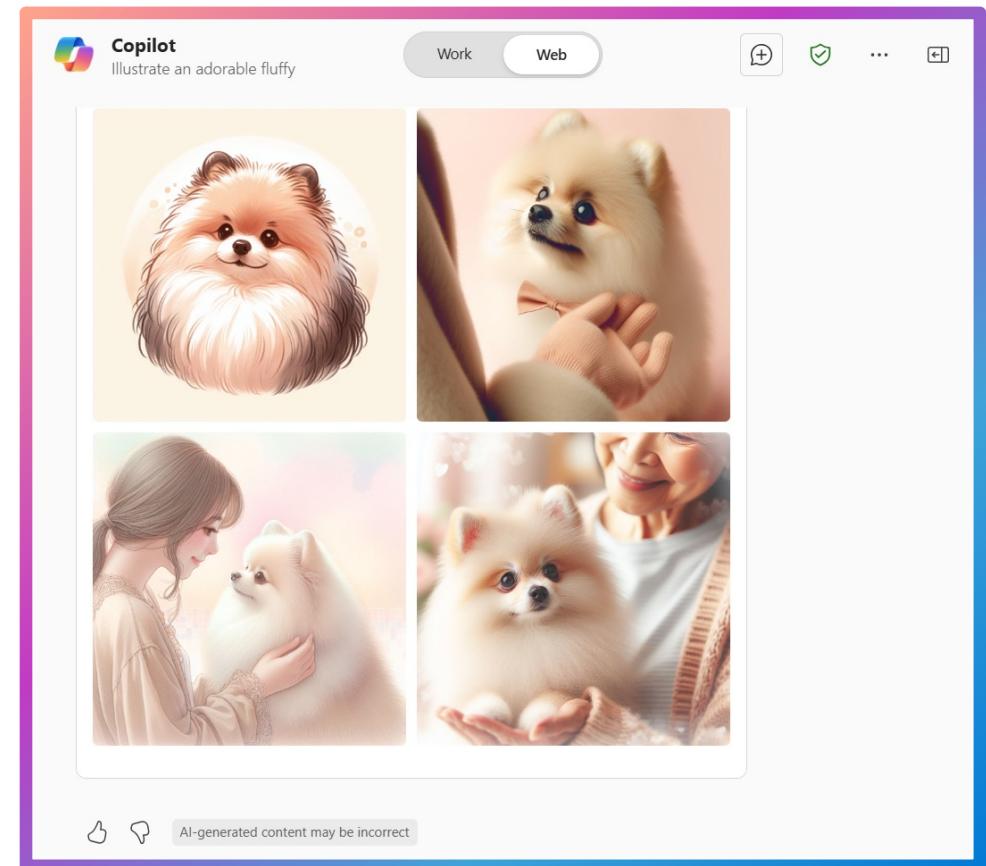
All the images in this presentation are generated using Microsoft copilot. Prompts available within.

Add style and emotion elements

Prompt: Illustrate a Pomeranian gazing lovingly at its owner, using a soft pastel color palette.

Elements:

- **Emotion:** The prompt evokes a specific emotion (love).
- **Style:** The style (soft pastels) is emphasized.



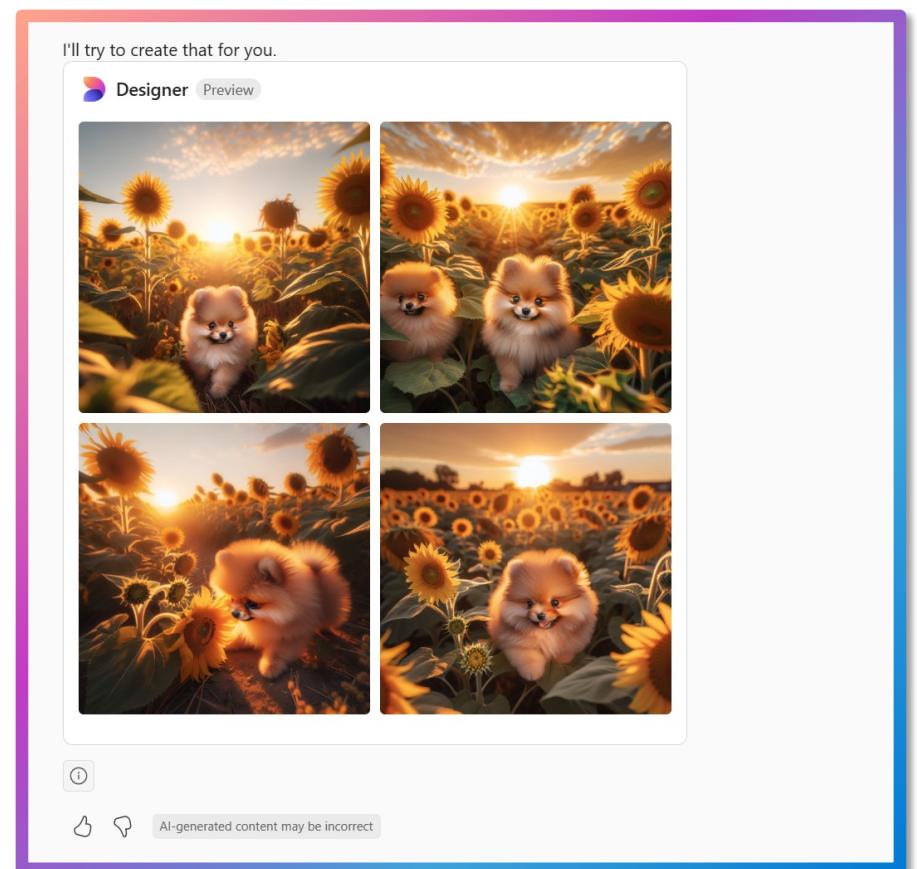
All the images in this presentation are generated using Microsoft copilot. Prompts available within.

Add elements to set the scene

Prompt: *Compose a scene: A Pomeranian puppy exploring a sunflower field during golden hour.*

Elements:

- **Narrative:** The prompt sets up a story (exploring a sunflower field).
- **Scene setting:** The context (golden hour, sunflower field) adds depth.



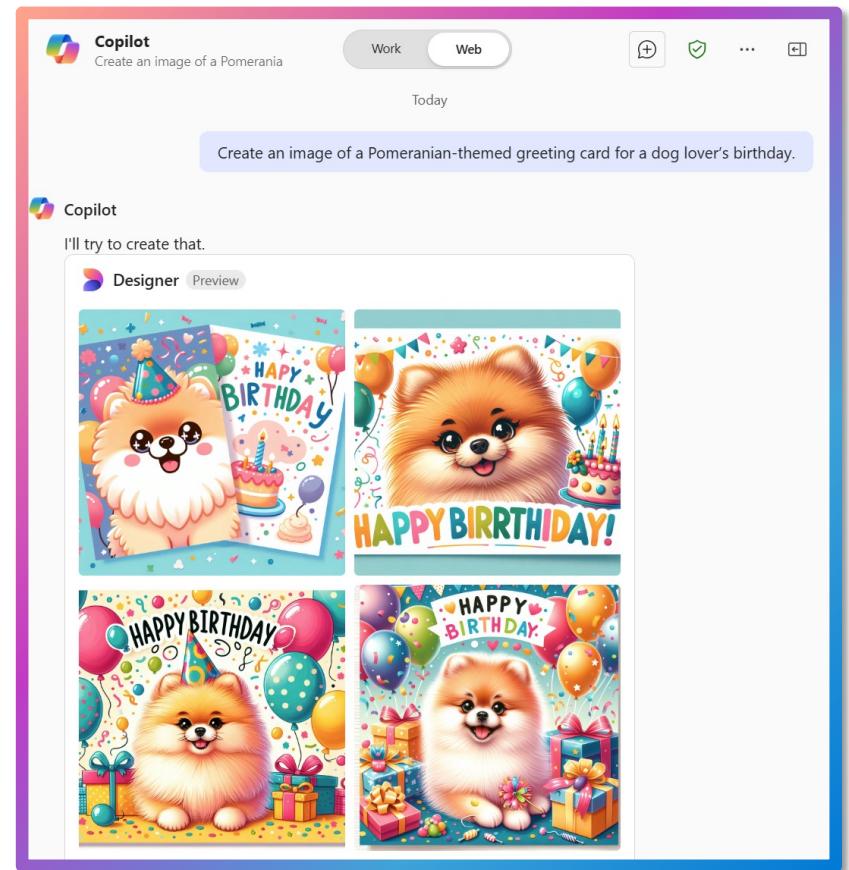
All the images in this presentation are generated using Microsoft copilot. Prompts available within.

Add details tailored to an audience or purpose

Prompt: *Create an image of a Pomeranian-themed greeting card for a dog lover's birthday.*

Elements:

- **Audience:** The audience is specified (dog lover).
- **Purpose:** The purpose is to celebrate a birthday.



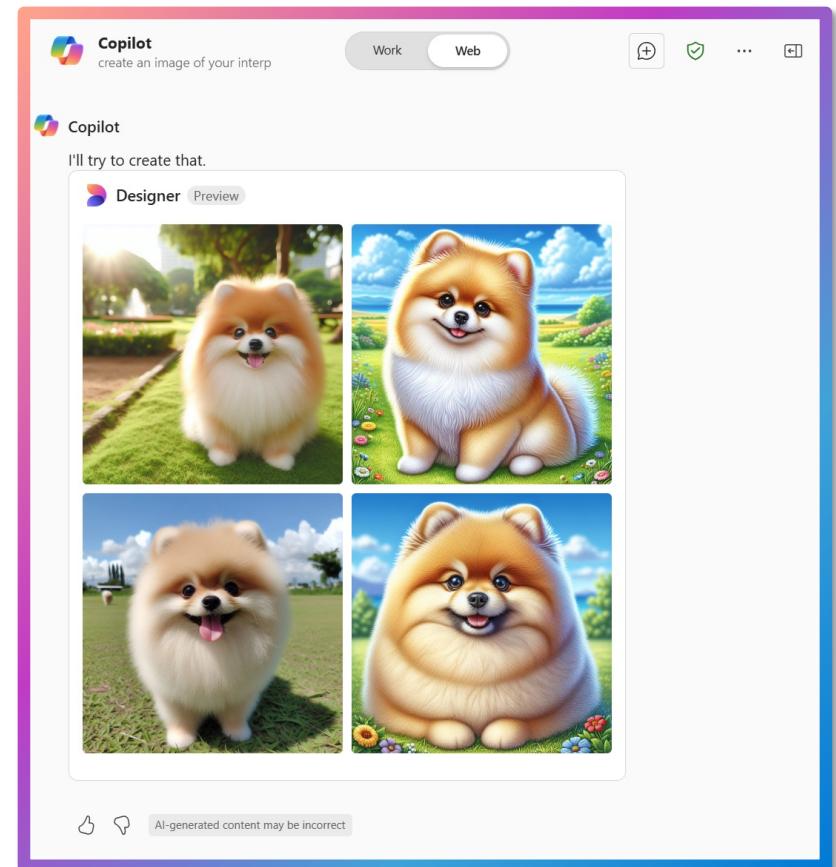
All the images in this presentation are generated using Microsoft copilot. Prompts available within.

Add details for Copilot's input

Prompt: *Create an image but freely interpret 'Pomeranian' in your favorite art style.*

Elements:

- **Creative freedom:** You have lots of artistic freedom (within the constraints of Responsible AI).
- **Personalization:** Possible to choose any style. Here I let the LLM choose the artistic style.



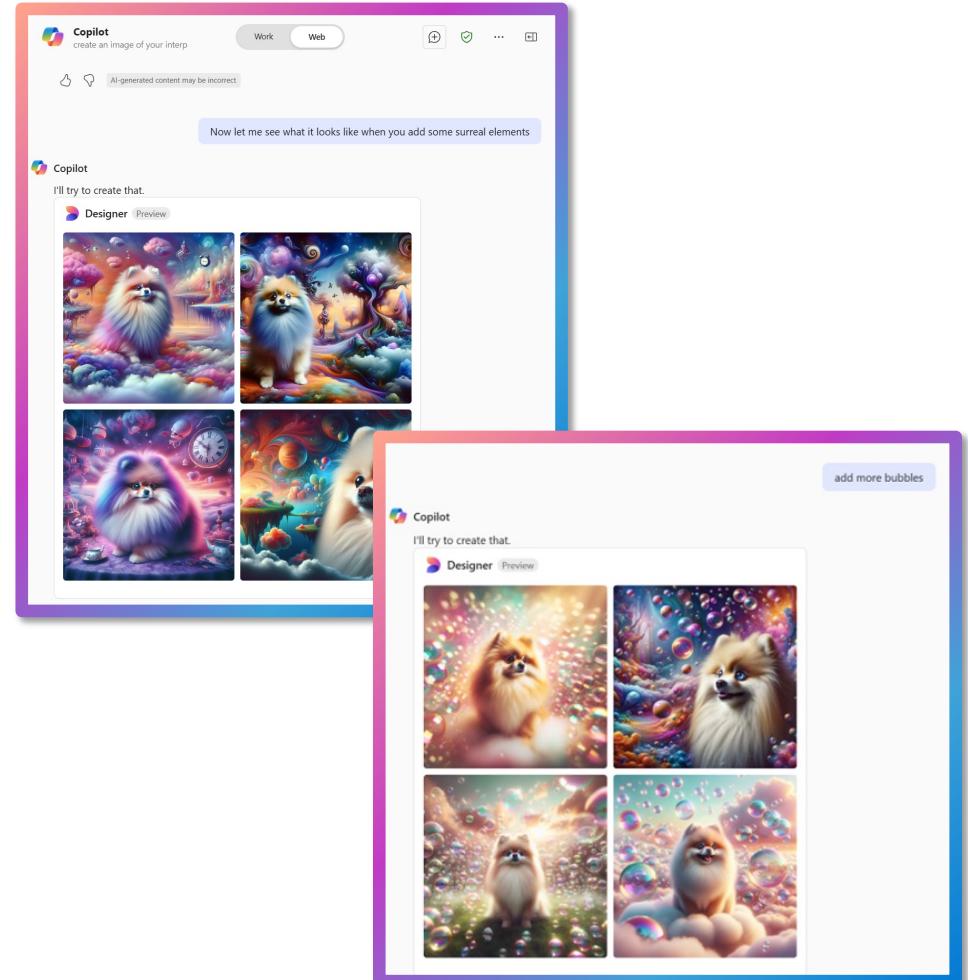
All the images in this presentation are generated using Microsoft copilot. Prompts available within.

Add details in iterations

Prompt: *Iterate on your previous Pomeranian artwork, incorporating surreal elements.*

Elements:

- **Advanced constraints:** The constraint is to build upon existing work.
- **Iteration:** The prompt encourages revisiting and enhancing previous creations.



What have we learned so far?

Possible elements of a prompt:

- Specify a **task**, or pose a **question**
- Provide a **role**
- Describe the **audience** and or the **purpose**
- Set a **context** or a **scene**
- Set a **tone**
- Provide **constraints**
- Specify a **format**
- Specify a **style**
- **Repeat** important instructions
- Put most **critical instructions** last
- Describe **complex elements** to direct the output
- Provide **details** to direct the output
- Insert **emotions** when appropriate
- Provide a **narrative** to set up a story to direct the output
- There is **wide creative freedom**
- Build upon existing work and **iterate**

You could include **all these elements, including iterating** on a long multi-element prompt. But only use what you need to get your desired result.



How to create and improve prompts with Copilot



All the images in this presentation are generated using Microsoft copilot. Prompts available within.

Work with Copilot to create your prompts

Prompt 1:

Create an image of a Pomeranian in the style of Monet.

You
Create an image of a pomeranian in the style of Monet.

Copilot
I'll try to create that.

"a pomeranian in the style of Monet"

Prompt 2:

How would you describe the style of Monet?

Copilot
Claude Monet, a founder of French Impressionism, is renowned for his unique style characterized by:

- **Light and Color:** Monet focused on capturing the effects of light and color rather than precise details. He often painted the same scene multiple times to show how it changed with the light.
- **Brushstrokes:** His brushstrokes are visible and often short and quick, giving a sense of movement and spontaneity.
- **Subject Matter:** He frequently painted landscapes, gardens, and water scenes, especially his famous water lilies and the Japanese bridge in his garden at Giverny.
- **Atmosphere:** Monet's works often evoke a dreamy, almost ethereal atmosphere, emphasizing the beauty of the natural world.

His paintings are vibrant and full of life, capturing the fleeting moments of nature. 🌸

Do you have a favorite Monet painting?

[Edit in Pages](#) [Copy](#) [Share](#) [Like](#) [Dislike](#) AI-generated content may be incorrect

What are some famous Monet paintings? How did Monet influence other artists?

Can you explain Impressionism further?

Result:

Designer Preview

The results are four generated images of a Pomeranian in a Monet-style landscape, featuring vibrant colors and visible brushstrokes, set against a backdrop of flowers and foliage.

All the images in this presentation are generated using Microsoft copilot. Prompts available within.

Work with Copilot to create your prompts cont.

Prompt:

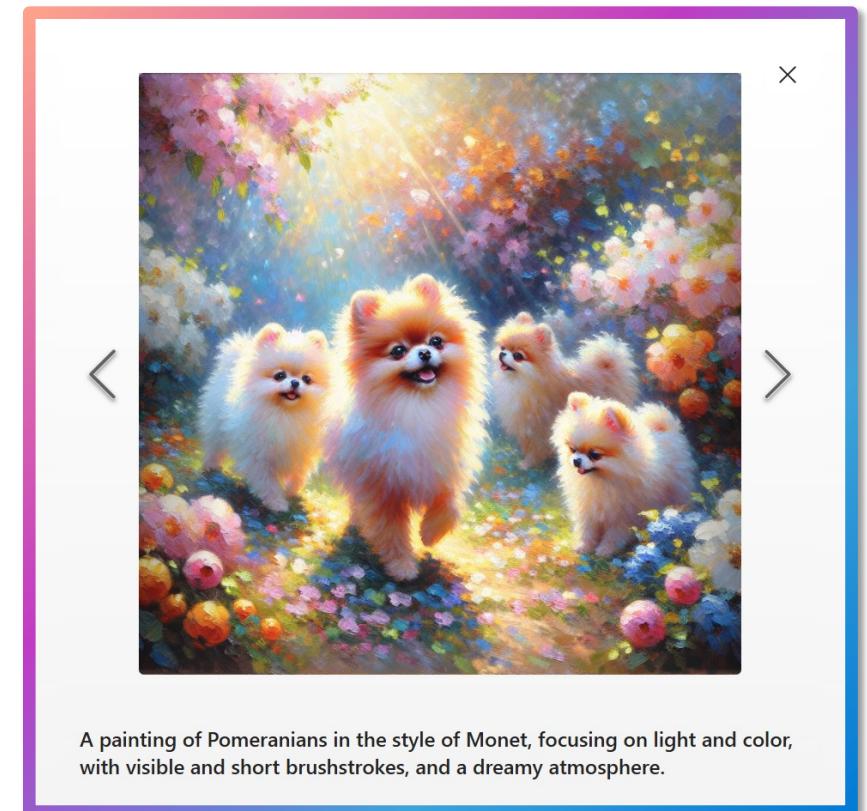
Create a painting of a Pomeranians with this style:

Light and Color: Monet focused on capturing the effects of light and color rather than precise details. He often painted the same scene multiple times to show how it changed with the light.

Brushstrokes: His brushstrokes are visible and often short and quick, giving a sense of movement and spontaneity.

Subject Matter: He frequently painted landscapes, gardens, and water scenes, especially his famous water lilies and the Japanese bridge in his garden at Giverny.

Atmosphere: Monet's works often evoke a dreamy, almost ethereal atmosphere, emphasizing the beauty of the natural world.



All the images in this presentation are generated using Microsoft copilot. Prompts available within.

Work with Copilot to create your prompts cont. Pt 1

Prompt:

Role: A very skilled and creative painter

Task: Create an image of a Pomeranian

Audience: Children and Adults

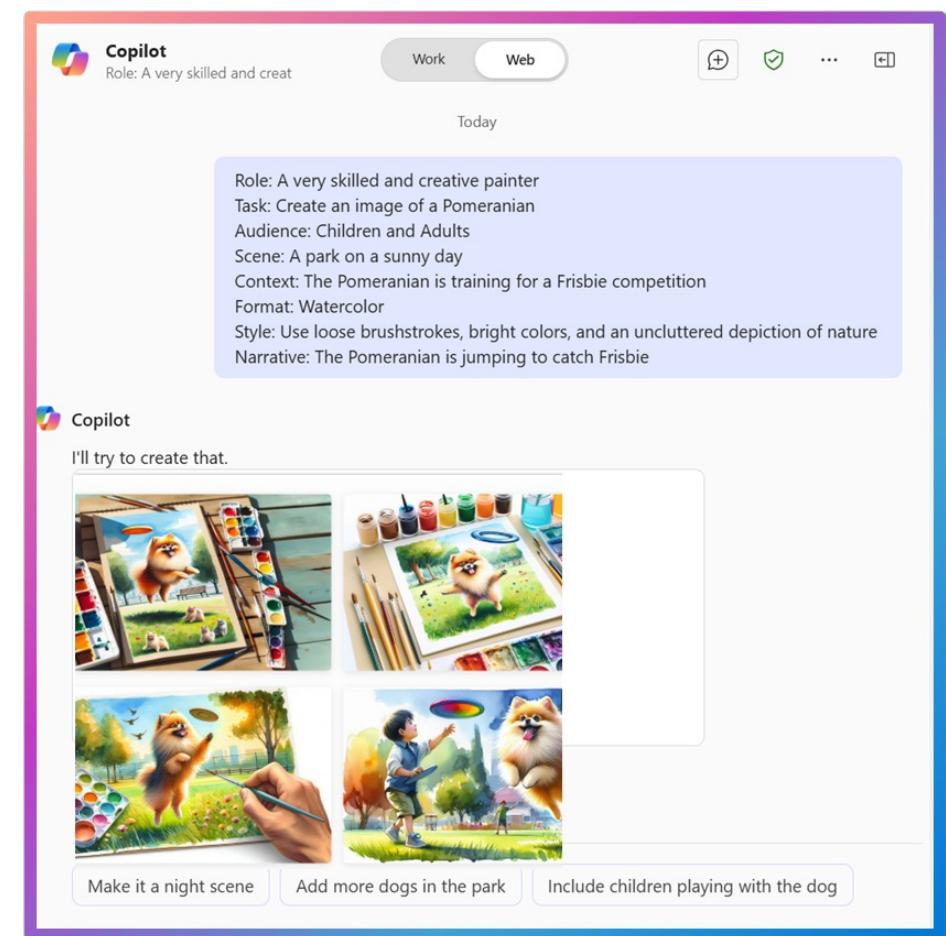
Scene: A park on a sunny day

Context: The Pomeranian is training for a Frisbie competition

Format: Watercolor

Style: Use loose brushstrokes, bright colors, and an uncluttered depiction of nature

Narrative: The Pomeranian is jumping to catch Frisbie



All the images in this presentation are generated using Microsoft copilot. Prompts available within.

Work with Copilot to create your prompts cont. Pt 2

Confirmation prompt:

"acknowledge you have read this prompt."

Confirmation prompt to **create an embellished** descriptive version of my parameter prompt.

Confirmation prompts can be created for either Web or Work mode.



You

i would like you to embellish an image creating prompt. adding elements that will make the image created more vibrant. acknowledge that you have read this prompt and then i will give you the following: embellish this prompt and i will include the prompt in quotes



Copilot

Got it! I'm ready to help you embellish your image creation prompt to make it more vibrant. Please go ahead and provide the prompt you'd like me to enhance.



You

embellish this prompt, but give your response in flowing text and not in the following parameter format:

"Role: A very skilled and creative painter

Task: Create a image of a Pomeranian

Audience: Children and Adults

Scene: A park on a sunny day

Context: The Pomeranian is training for a Frisbie competition

Format: Watercolor

Style: Use loose brushstrokes, bright colors, and an uncluttered depiction of nature

Narrative: The Pomeranian is jumping to catch Frisbie"

All the images in this presentation are generated using Microsoft copilot. Prompts available within.

Work with Copilot to create your prompts cont. Pt 3

Copilot followed the instructions and created the embellished image prompt.



Copilot

Imagine a highly talented and imaginative painter setting out to create a captivating watercolor image of a lively Pomeranian. This delightful scene is set in a vibrant park on a sunny day, where both children and adults are enjoying the cheerful atmosphere. The Pomeranian, full of energy and enthusiasm, is in the midst of training for a Frisbee competition.

The artist uses loose brushstrokes and a palette of bright, vivid colors to bring the scene to life, capturing the essence of a carefree day in nature. The park is depicted with an uncluttered, serene backdrop, allowing the focus to remain on the playful Pomeranian. In a dynamic moment, the Pomeranian is shown leaping into the air, eyes locked on the Frisbee, embodying both grace and determination. The overall composition exudes joy and excitement, making it a delightful piece for viewers of all ages.



You

Now create that image from this last prompt.



Copilot

I'll try to create that.

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Work with Copilot to create your prompts cont. Pt 4

The result that which started as a **parameterized prompt**, created with the prompt on the previous page.



A highly talented and imaginative painter setting out to create a c...

Designer Powered by DALL-E 3

99

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Incorporating data into a prompt

Prompt + Data: Example of loading an image to create a prompt

Prompt:
What prompt could I use to create an image similar to this one?

Then drag and drop an image into the copilot text box.

You

What prompt could I use to create an image similar to this one?



□ ⚪

Copilot

✓ Analyzing the image: Privacy blur hides faces from Copilot

To create an image similar to the one you described, you can use the following prompt:

"A serene park scene at sunrise with vibrant greenery, a cat sitting on a park bench, butterflies fluttering around, sunbeams piercing through the foliage, and colorful flowers in the foreground."

Feel free to adjust or expand upon this prompt to capture the exact details you envision! 🌿🌸😊

👍👎□⬇️🔊 AI-generated content may be incorrect

All the images in this presentation are generated using Microsoft copilot. Prompts available within.

Incorporating data into a prompt cont.

Applying the prompt created on the previous slide

Prompt:

Create an image of a serene park scene at sunrise with vibrant greenery, a cat sitting on a park bench, butterflies fluttering around, sunbeams piercing through the foliage, and colorful flowers in the foreground.

Copilot

I'll try to create that.

AI-generated content may be incorrect

The interface shows four generated images of a park scene. Each image features a cat sitting on a park bench, butterflies fluttering around, sunbeams piercing through trees, and a variety of colorful flowers in the foreground. The scenes differ slightly in lighting and composition, such as the presence of a street lamp or a different angle of the sun.

A serene park scene at sunrise with vibrant greenery, a cat sitting ...

Designer Powered by DALL-E 3

97

All the images in this presentation are generated using Microsoft copilot. Prompts available within.

Confirmation Prompt + Data: Classifier.

You can provide the name of each category and a brief description.

Prompt:

I would like you to categorize an image I will provide. Here are the categories:

1. **Nature Art:** Captivating landscapes, from serene forests to dramatic mountain ranges, showcasing Earth's beauty.
 2. **Abstract Art:** Visually captivating creations with unique forms, blending colors, shapes, and emotions into expressive masterpieces.
 3. **Minimalist Art:** Simple elegance—clean lines, negative space, and essential elements—speaking volumes through subtlety.
 4. **Vintage Art:** Nostalgic charm, evoking bygone eras through sepia tones, retro aesthetics, and timeless appeal.
 5. **Technology Art:** Futuristic glimpses—circuitry, sleek gadgets, and cutting-edge innovations—capturing our digital age.
- acknowledge that you have read this prompt and then I will give you an image
- Acknowledge that you have read this prompt and then I will give you an image.

 You

i would like you to categorize an image i will provide. here are the categories: 1. nature art: captivating landscapes, from serene forests to dramatic mountain ranges, showcasing earth's beauty. 2. abstract art: visually captivating creations with unique forms, blending colors, shapes, and emotions into expressive masterpieces. 3. minimalist art: simple elegance—clean lines, negative space, and essential elements—speaking volumes through subtlety. 4. vintage art: nostalgic charm, evoking bygone eras through sepia tones, retro aesthetics, and timeless appeal. 5. technology art: futuristic glimpses—circuitry, sleek gadgets, and cutting-edge innovations—capturing our digital age. acknowledge that you have read this prompt and then i will give you an image

 Copilot

Got it! I'm ready to categorize the image based on the provided categories. Please go ahead and share the image.

     AI-generated content may be incorrect

All the images in this presentation are generated using Microsoft copilot. Prompts available within.

Confirmation Prompt + Data: Classifier Cont.

The results.

Prompt:

Here is the image

Drag and drop the image into the input box.

You
Here is the image



Copilot
✓ Analyzing the image: Privacy blur hides faces from Copilot
Thank you for sharing the image. Based on my analysis, the image depicts a fantasy landscape with a large dragon perched atop a stone structure amidst snow-covered mountain peaks. The sky is filled with stars and has an ethereal quality, suggesting it could be a scene from a story or game.
Given the categories you provided, this image seems to best fit the **Nature Art** category due to the depiction of the captivating landscape and mountain ranges. However, considering the fantasy elements like the dragon and the ethereal sky, it could also be seen as a form of **Abstract Art**. Please note that art can be subjective and open to interpretation. 😊

AI-generated content may be incorrect

I agree, it's a beautiful landscape! | What other categories do you think could apply? | Can you describe the dragon in more detail?

All the images in this presentation are generated using Microsoft copilot. Prompts available within.

Improve any prompt with iteration prompts.

This prompt will help you create and improve any prompt.

This is an example of an iteration prompt.
I have set up Copilot to iterate on my answers to Copilot's follow-up questions.

Web or Work Mode Prompt:

I would like you Copilot to work with me to refine a prompt to deliver better results when I use it with you Copilot. We're going to perform that refining step multiple times by using an iterative method.

1). You will look at the initial prompt that I give you and you will make suggestions on how to improve it by showing me a prompt that you believe will generate better results.

2) You will ask me relevant questions to help improve the prompt.

3) When you have finished asking relevant questions you will then show me what you believe to be is an improved prompt and ask me if we should continue to try to improve it. acknowledge that you have read this prompt and then I will give you the prompt to improve.

You

i would like you copilot to work with me to refine a prompt to deliver better results when i use it with you copilot. we're going to perform that refining step multiple times by using an iterative method. 1). you will look at the initial prompt that i give you and you will make suggestions on how to improve it by showing me a prompt that you believe will generate better results. 2) you will ask me relevant questions to help improve the prompt. 3) when you have finished asking relevant questions you will then show me what you believe to be is an improved prompt and ask me if we should continue to try to improve it. acknowledge that you have read this prompt and then i will give you prompt to improve

Copilot

Absolutely, I understand your request and I'm ready to assist you in refining your prompt. Please go ahead and share the initial prompt that you'd like to improve. Let's make it better together! 😊

You

Let's work on this image prompt "create an image of a pomeranian"

All the images in this presentation are generated using Microsoft copilot. Prompts available within.

Improve any prompt with iteration prompts Cont.



You

Let's work on this image prompt "create an image of a pomeranian"



Copilot

Great! Let's start refining your prompt. Here's an initial suggestion to make it more specific and detailed:

Initial Prompt: "Create an image of a Pomeranian."

Improved Prompt: "Create a high-resolution image of a fluffy, white Pomeranian with a happy expression, sitting on a grassy field with a clear blue sky in the background."

Now, let's ask some relevant questions to further refine this prompt:

- Color and Appearance:** Do you have a specific color or appearance in mind for the Pomeranian (e.g., white, tan, fluffy, short-haired)?
- Setting:** Where would you like the Pomeranian to be (e.g., indoors, outdoors, in a park, on a beach)?
- Pose and Expression:** What kind of pose or expression should the Pomeranian have (e.g., sitting, running, happy, playful)?
- Additional Elements:** Are there any additional elements or details you want to include in the image (e.g., toys, other animals, specific time of day)?

Once you provide more details, I'll suggest a further improved prompt. Let me know your preferences!



You

I want it tri-colored, fluffy, running on a beach, happy, at sunset.



Copilot

Got it! Here's an improved version of your prompt based on your preferences:

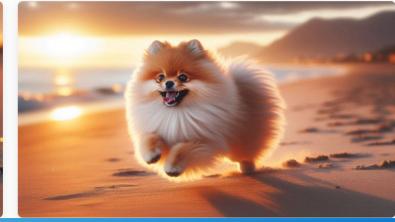
Improved Prompt: "Create a high-resolution image of a tri-colored, fluffy Pomeranian running happily on a beach at sunset."

Would you like to add any more details or make further adjustments to this prompt? If not, should we continue refining it or try generating the image with this prompt?



You

ok, create that image.



Recap what we learned

- Use Copilot to **Create** Prompts
- Prompt can be in a **descriptive** format, or as a **list of parameters**.
- You can save prompts in a **“confirmation style”** to avoid having to edit in the middle of a saved prompt.
- You can provide data to your prompts. These can be more **text, images, documents, or audio**.
- Also use **iteration** to improve prompts, or results from prompts.
- Find or create you favorite **iterative starter prompt**.
- **Save and Share** your prompts!





Resources

Examples and Resources to help you get started

Empower your Copilot Skilling event with Viva:

[How to set aside time for learning with Viva Insights](#)

[How to set up a Community in Viva Engage](#)

[How to organize a live event in Viva Engage](#)

[How to create a publication in Viva Amplify](#)

[Create a culture of connectivity with Viva Connections](#)

[How to create a survey with Viva Pulse](#)

[How to Manage OKRs in Viva Goals](#)

Create your own Copilot Champs Community:

[Copilot Champs Community Framework](#)

[Article: Driving Microsoft 365 Copilot adoption with our Copilot Champs Community](#)