

GenAI Design and Marketing Studio Application

A short documentation

October 2024

Welcome to the GenAI Design and Marketing Studio Application. This short document will guide you through the different functionalities offered by the studio.

Welcome screen, Project settings & Document Assistant

They are the two first artifacts that you see when you enter the application.



Figure 1 - Welcome screen, Project settings, and Documentation Assistant

Project Settings

It is mandatory to start by setting the Google Cloud project parameters:

- **Project name:** it is the name of your Google Cloud Project linked to the application. It is used to call the Gemini and Imagen APIs and to store the result of your work in the Google Cloud Storage system.
- **Location:** the Google Cloud region that you want to use. The different models and storage buckets will be called from this location.
- **Bucket name:** the Google Cloud Storage bucket that you want to use to save the work done in the studio. If the bucket does not exist yes, it will be created. If the bucket already exists, the application returns a warning message telling you that the bucket exists, so any saved artifact will be located in this existing bucket.

Once you have updated the parameters, **click on the save settings button**. If you do not do it, the application will return an error the first time that you try to use Gemini or Imagen models.

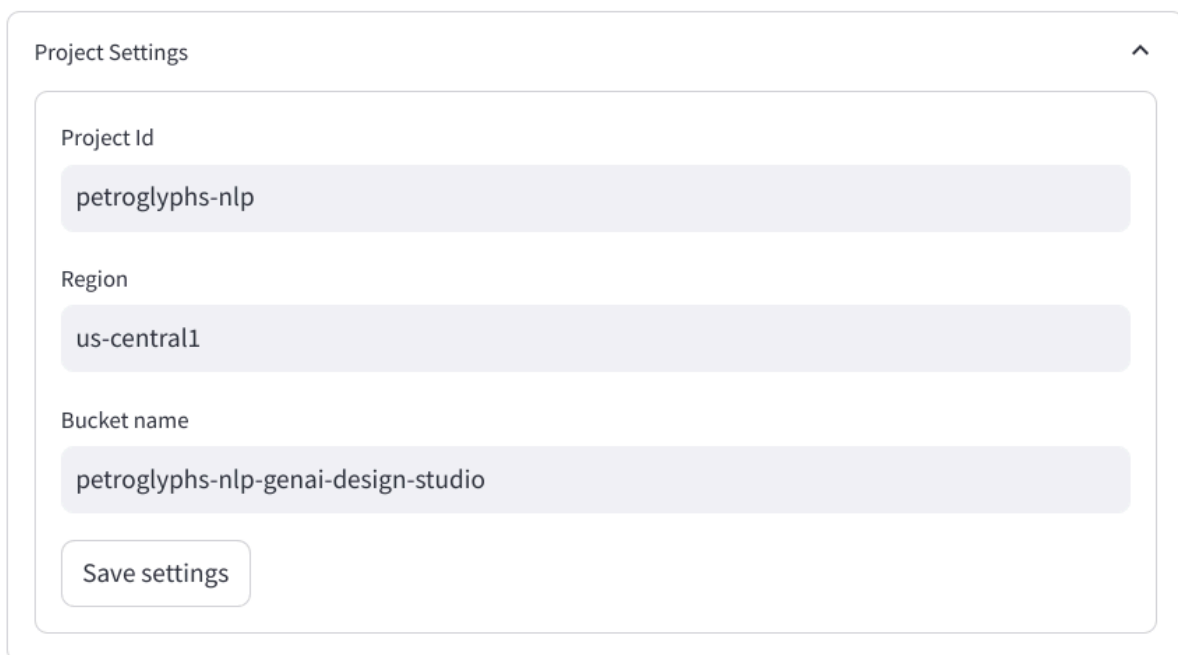
The image shows a 'Project Settings' dialog box with a title bar and a close button. Inside, there are three text input fields: 'Project Id' with the value 'petroglyphs-nlp', 'Region' with the value 'us-central1', and 'Bucket name' with the value 'petroglyphs-nlp-genai-design-studio'. Below these fields is a 'Save settings' button.

Figure 2 - Project settings

Documentation Assistant

It is the first tool engineered by Gemini that you can use from the welcome page of the application. It is a search engine that you can use to answer any question you have in your head. Just enter the question in the text input area, click the “Answer...” button and Gemini answers it, including the Google Search used for grounding.

Remark: This tool has been set up as a single-turn search engine. It does not offer multi-turn interaction like a chatbot.

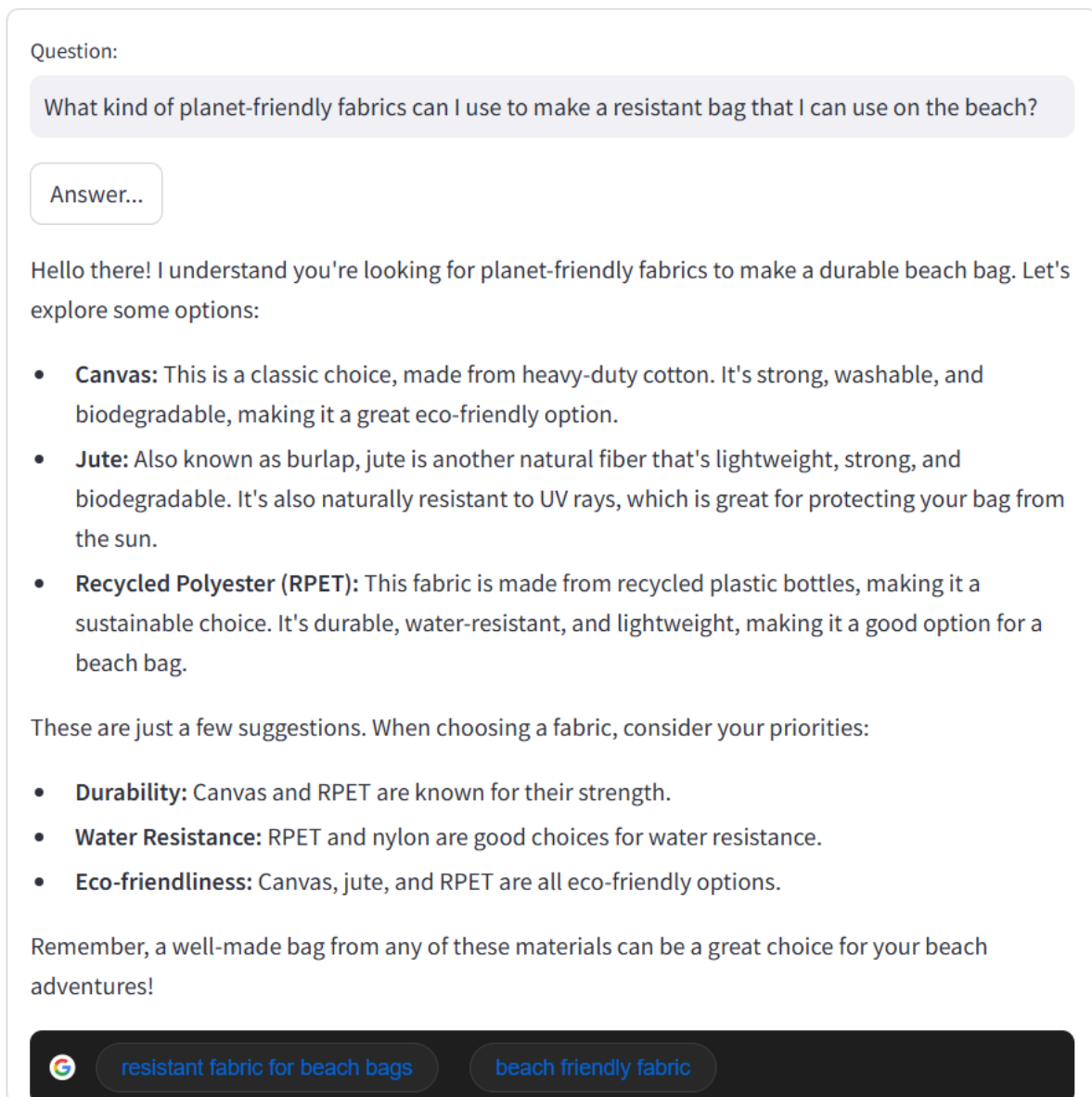


Figure 3 - Documentation Assistant with Google Search grounding

Moodboards Creation

It is the second tool that you can use. You just have to click on the “Moodboards” tab from the welcome page and enter the Moodboards creation assistant.

The user interface could be intimidating the first time that you use it, but do not worry as this documentation explains each button or UI element. The good thing is that the other tools available in the application are very similar to the Moodboard creation assistant.

Let's see what we have here:

1. **Title:** just enter the title for your new moodboards. It will be used if you want to save your work in the bucket.

2. **Keywords/Vibes:** enter the topics and other words that you want Imagen to use to create your mood boards. In general, Imagen follows your instructions but refrains from using keywords related to children or inappropriate topics. If you do, Imagen can refuse to generate any image for safety reasons. If it happens, an error message will appear. Just change or rephrase the keywords and vibes and retry.
3. **Target audience:** enter the audience targeted by the moodboards.
4. **Prompt:** you have access to the prompt used by Imagen, more precisely the system instructions. You can modify it if you wish, however, the default one is pretty good.
5. **Content instructions:** same as the prompt, you can modify the content instructions if the default ones do not correspond to what you need. Here, you have the entire freedom to follow your inspiration and instruct Imagen on the way that the moodboards will be composed.
6. Image parameters:
 - a. **Number of images:** number of images to be generated each time that you click the “draft a moodboard” button.
 - b. **Aspect Ratio:** the aspect ratio of the generated images
 - c. **Allow Person:** tell Imagen if adults can be represented in the images. Children cannot be represented.
 - d. **Watermark:** any image generated by Imagen can be watermarked by a transparent tag to indicate that the image has been generated by an AI.
7. **Model:** you have the choice between two Imagen models:
 - a. ‘Imagen-3.0-fast-generate-001’: a fast Imagen that can be used to rapidly draft your idea.
 - b. ‘Imagen-3.0-generate-001’: a less fast Imagen which produces the best quality.
8. **Save generated moodboard:** check this option if you want the moodboard images to be preserved in the GCS bucket. The title of the mood boards is used to name the folder in the bucket. You have to check this option BEFORE you generate the moodboard images.
9. **Draft a moodboard button:** when everything is set up correctly, just click the button, and after a few seconds, the moodboard images will appear. You can enlarge them for better visualization by clicking the double arrow button that pops up on the top right corner of the images when you overlay the images with the cursor.

Title

A day at the beach

Keywords/Vibes

sunny day, beach, surf, coconuts, palm trees, swimming suits

Target audience

people in their 20s and 30s

Moodboard Assistant Prompt (can be modified if needed)

Content intructions (can be modified if needed)

- Include images reflecting the overall aesthetic and keywords, with an emphasis on incorporating objects, trims, textures, patterns, and other decorative elements.
- Color palette should complement the theme and vibes.
- At least three objects. These objects must be relevant to the prompt and be in active use.
- At least two images of scenery or landscape
- At least one human but no more than three.
- At least one full length avatar
- Make sure that the humans are of different races
- All figures must be female.
- All figures must be participating in activities related to the theme.
- Include fabric textures as swatches on the grid

Number of images

2

Aspect Ratio

4:3

Allow Person

allow_adult

☐ Watermark

Model

imagen-3.0-fast-generate-001

☐ Save generated moodboard

Draft a moodboard...

Figure 4 - Moodboard Assistant

5

Ideation Assistant

The Ideation Assistant helps the designers by exchanging with them about their ideas, designs, and concepts. It can also analyze pictures and illustrations and save the generated descriptions for future use.

Ideation Co-Writing

It is a chatbot that drives discussions with designers. You can change the general behavior of the Assistant by modifying its persona through a prompt. Do not forget to save the most recent conversation in the Google Cloud Storage bucket if you want to keep it for later use.

The screenshot displays the Ideation Co-Writing interface. At the top, a box titled "Writing Assistant Persona (can be modified if needed)" contains a text area with the following persona definition: "You are a writing assistant working for a designer. You always show perfect courtesy in your conversation with the users. Your work is mainly to unlock the creativity potential of the users by exchanging new ideas for object design. Always focus on the users's requirements and chat history. Ask questions more than provide answers. Keep your messages shorter than 5 sentences." To the right of this box is a green label "Assistant persona". Below the persona box is a chat input area with a light blue bar containing the text "Hello, How can I help you today?" and a send button. The chat history shows four messages: a red speech bubble saying "Good morning", a yellow speech bubble asking about design projects, a red speech bubble asking about beach bags, and a yellow speech bubble asking for more details about the bags. At the bottom, there is a text input field for "Conversation name" and two buttons: "Save Ideation conversation" and "Reset conversation". To the right of these buttons is an orange label "Save Conversation".

Figure 5 - Ideation Co-Writing

Products Analysis

You can select an image that you want the Assistant to analyze and create a description (caption) that you can save for later use (for example, to generate another image inspired by an existing one).

The uploaded image is automatically saved in the Google Cloud Storage bucket.



Figure 6 - Product Analysis

Design Visual Assistant

The Design Visual Assistant helps the designers to create illustrations and photo-realistic images of objects. You just have to enter a detailed description of the object in a particular context and the Assistant will generate for you images and illustrations. You can save the created artifacts (and associated prompts) in the Google Cloud Storage bucket.

The image assistant is very similar to the moodboard creation one, so please refer to page 5 for any questions regarding the user interface.

Let's reuse the bag description generated from the existing image to create a new version of it, in a different context.

“Create a sketch for a blue duffel bag with white handles. The bag is made of a textured fabric and is large enough to hold all of your beach essentials. A perfect choice for a day trip to the beach, this bag is stylish and functional. The background should represent surfers on a Hawaiian beach. People visible on the beach are wearing swimsuits and Hawaiian shirts.”

Instructions

Create a sketch for a blue duffel bag with white handles. The bag is made of a textured fabric and is large enough to hold all of your beach essentials. A perfect choice for a day trip to the beach, this bag is stylish and functional. The background should represent surfers on a Hawaiian beach. People visible on the beach are wearing swimsuits and Hawaiian shirts.

Number of images

1

–

+

Aspect Ratio

1:1

▼

Allow Person

allow_adult

▼

☐ Watermark

Model

imagen-3.0-generate-001

▼

☐ Save generated images

Image(s) Folder

Generate images...




Figure 7 - Design Visual Assistant

You can try the same prompt again, but this time, ask for a photorealistic image to be generated.



Figure 8 - Photo-realistic image generated with the same prompt

Marketing Assistant

The Marketing Assistant helps the marketers by shaping with them their ideas, and strategies for advertisements. It can also generate pictures and illustrations based on the most recent conversation and save the generated images and illustrations for future use.

Marketing Co-Writing

It is a chatbot that drives discussions with marketers. By default, the Marketing Co-Writing chatbot will ask 5 important questions to frame your advertisement campaign. The objective is to engage the conversation and go back and forth until the assistant has enough information to propose a draft of the marketing artifact.

The conversation with the Marketing Co-Writing Assistant is automatically used for the illustration and image creation proposed in the same tab (Marketing Visual Assistant).

You can change the general behavior of the Assistant by modifying its persona through a prompt. For example, you can change the list of questions that you want to exchange about.

Do not forget to save the most recent conversation in the Google Cloud Storage bucket if you want to keep it for later use.

The Marketing Co-Writing is similar to the Ideation Co-Writing assistant, please refer to page 6 for any questions regarding the user interface.

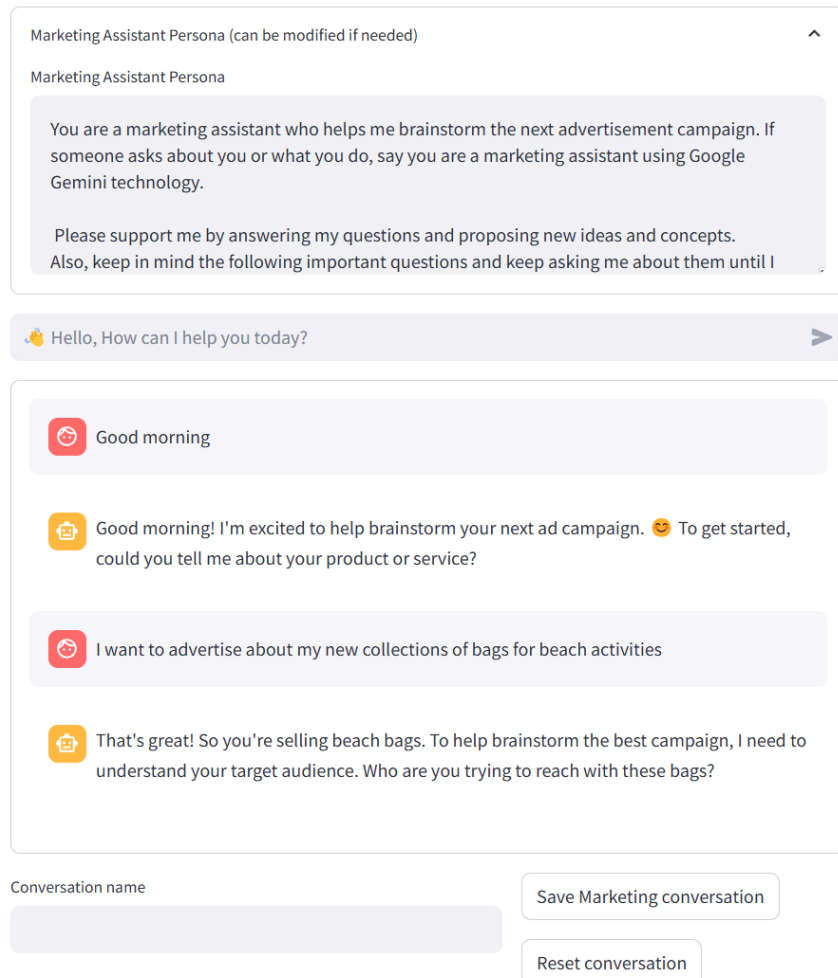


Figure 9 - Marketing Co-Writing Assistant

Marketing Visual Assistant

The Marketing Visual Assistant helps marketers create illustrations and photo-realistic images that they can use to brainstorm their new advertisements.

You just have to copy-paste extracts of the conversation that you just have with the Co-Writing Assistant and the Visual Assistant will generate images and illustrations.

The context of your conversation is also passed transparently to the Visual Assistant to enrich the prompt. You can save the created artifacts (and associated prompts) in the Google Cloud Storage bucket.

Refer to page 8 for any questions regarding the user interface, as the Marketing Visual Assistant shares the same interface as the Design Visual Assistant.

Instructions

Create a photo-realistic image for an advertisement from the features defined here:

"Beach Day Vibes": Two women, wearing summery outfits, are laughing and applying sunscreen while lounging on beach towels. Between them, rests your stylish beach bag, open with a towel and sunglasses peeking out. The background is a beautiful, sunny beach with blue water.

Number of images

1

Aspect Ratio

1:1

Allow Person

allow_adult

☐ Watermark

Model

imagen-3.0-generate-001

☐ Save generated images

Image(s) Folder

Generate images...

Figure 10 - Marketing Visual Assistant

Have fun with the GenAI Design and Marketing Studio application and enjoy responsibly.