



Nano Banana 2.1

Model card

Nano Banana 2.1 — Model Card

Model Cards are intended to provide essential information on Gemini models, including known limitations, mitigation approaches, and safety performance. Model cards may be updated from time to time; for example, to include updated evaluations as the model is improved or revised. See the [Google DeepMind site](#) for a comprehensive list of model cards.

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Model Information

Description

Nano Banana 2.1 is a member of the Gemini 3 series of models, a suite of highly-capable, natively multimodal reasoning models. Nano Banana 2.1 can comprehend input from different information sources, including text and images. Image and text output is generated in the response.

Model dependencies

Nano Banana 2.1 is based on Gemini 3.6 Flash.

Inputs

Text strings (e.g., a prompt, document(s)) and images, with a token context window of up to 1M.

Outputs

Image, with a 4K token output and text, with a 64K token output.

Architecture

Nano Banana 2.1 is based on Gemini 3.6 Flash. For more information about the model architecture for Gemini 3.6 Flash, see the Gemini 3.6 Flash [model card](#).

Model Data

Training Dataset

Nano Banana 2.1 is based on Gemini 3.6 Flash. For more information about the training dataset for Gemini 3.6 Flash, see the Gemini 3.6 Flash [model card](#).

Training Data Processing

For more information about the training data processing for Nano Banana 2.1, see the Gemini 3.6 Flash [model card](#).

Implementation and Sustainability

Hardware

Nano Banana 2.1 is based on Gemini 3.6 Flash. For more information about the hardware for Nano Banana 2.1 and our continued [commitment to operate sustainably](#), see the Gemini 3.6 Flash [model card](#).

Software

Nano Banana 2.1 is based on Gemini 3.6 Flash. For more information about the software for Gemini 3.6 Flash, see the Gemini 3.6 Flash [model card](#).

Distribution

Nano Banana 2.1 is distributed in the following channels; respective documentation shared in line:

- [Gemini App](#)
- [Google AI Studio](#)
- [Gemini API](#)
- [Google Search AI Mode](#)
- [Google Ads](#)
- [Google Flow](#)

- [Google Stitch](#)

Our models are available to downstream providers via an application program interface (API) and subject to relevant terms of use. There is no required hardware or software to use the model. For AI Studio and Gemini API, see the [Gemini API Additional Terms of Service](#); for Gemini Enterprise Agent Platform, see [Google Cloud Platform Terms of Service](#). For more information, see [Gemini Model API instructions](#) and [Gemini API quickstart](#).

Evaluation

Approach

Nano Banana 2.1 was evaluated using the methodology below:

- **Capabilities / Benchmarks** cover several different quality aspects of image generation, which are in two broad categories:
 - Capability sets: diverse Text-to-Image (T2I) and editing public benchmarks, and internal evals are used, covering a wide range of capabilities.
 - T2I: General Text-to-Image, i18n Text Rendering, Factuality (world knowledge, EDU, etc), Tool-Use, Visual Design.
 - Editing: General Image Editing, Stylization, Character Editing, Object/Environment Editing, Ink (doodle) based Editing, Multi-Image (Multi-Product Recontextualization, Multi-Character, etc.),
 - Multi-Turn: Covers both static and dynamic conversations.
 - Regression sets: popular use cases observed on Gemini 2.5 Flash Image, and Gemini 3 Pro Image, to ensure Nano Banana 2.1 does not show any noticeable regressions.
- **Eval Methodology**
 - SxS human eval to get Elo across diverse T2I, Editing on overall preference, design quality, etc.
 - Single sided AutoRater on factuality.

Results

Results as of October, 2026 are listed below:

Capabilities: Text-to-Image

Capability Benchmark	Nano Banana 2.1 (Thinking)	Nano Banana 2.1 (No Thinking)	Gemini 3.1 Flash Image ("Nano Banana 2" Thinking)	Gemini 3 Pro Image ("Nano Banana Pro")
Overall Preference	1050 +/- 14	1015 +/- 13	990 +/- 7	935 +/- 8
Infographic Design	1048 +/- 17	1001 +/- 17	961 +/- 12	912 +/- 12
Infographic Factuality	0.521	0.328	0.179	0.265

Capabilities: Editing

Capability Benchmark	Nano Banana 2.1 (Thinking)	Nano Banana 2.1 (No Thinking)	Gemini 3.1 Flash Image ("Nano Banana 2" Thinking")	Gemini 3 Pro Image ("Nano Banana Pro")
General Editing	1026 +/- 12	980 +/- 15	938 +/- 11	939 +/- 10
Single-Character Consistency	1028 +/- 14	1021 +/- 14	981 +/- 10	991 +/- 9
Multi-Character Consistency	1106 +/- 14	1068 +/- 14	978 +/- 10	1011 +/- 10
Mask/Ink-Based Editing	1049 +/- 15	1042 +/- 16	965 +/- 12	927 +/- 12
Product Consistency	1024 +/- 18	981 +/- 18	955 +/- 22	965 +/- 14
Stylization	1062 +/- 20	1036 +/- 17	991 +/- 12	990 +/- 12
Multi-Reference Editing	1066 +/- 22	1041 +/- 20	988 +/- 13	989 +/- 12

Intended Usage and Limitations

Benefit and Intended Usage

Nano Banana 2.1 is capable of using Gemini's real-world knowledge to deliver precise results and reflect the world around you, from complex infographics to historically accurate scenes. It is well-suited for applications that require:

- creation and editing of images with professional levels of precision and control and multiple, quick iterations
- generation of clear text for posters and intricate diagrams
- long context real-world knowledge
- localized text rendering across several languages

Known Limitations

Nano Banana 2.1 may exhibit some of the general limitations of foundation models, such as hallucinations. There may also be occasional slowness or timeout issues.

Nano Banana 2.1 still has room for several quality improvements:

- Poor text rendering in small text (often blurry in 1k model), long paragraphs, page length
- Character consistency is not always perfect between input images and generated output image
- Partial instruction following and ink persistence in masked/doodle based editing
- During image editing, we observe rare instances of persistent subject pose, where structural alignment from the input image is retained in the generated output image
- Occasional confusion around spatial localisation (e.g. left/right etc.)
- Still limited in advanced capabilities with world knowledge, 3D reasoning and factuality

In addition to this, we are continually working to improve jailbreak resistance and have recently strengthened the mitigations across Frontier Safety.

The knowledge cutoff date for Gemini 3.6 Flash is March 2026 – users can expect updated information for some domains while in others they may experience the model's knowledge is limited to January 2025 (in line with the Gemini 3 Model Family). For more information about known limitations, see the Gemini 3.6 Flash [model card](#).

Acceptable Usage

For more information about the acceptable usage for Nano Banana 2.1, see the Gemini 3.6 Flash [model card](#).

Ethics and Content Safety

Evaluation Approach

For more information about the evaluation approach for Nano Banana 2.1, see the Gemini 3.6 Flash [model card](#).

Safety Policies

For more information about the safety policies for Nano Banana 2.1, see the Gemini 3.6 Flash [model card](#).

Human Red Teaming Results

We conduct manual red teaming by specialist teams who sit outside of the model development team. High-level findings are fed back to the model team. For child safety evaluations, Nano Banana 2.1 satisfied required launch thresholds, which were developed by expert teams to protect children online and meet [Google's commitments to child safety](#) across our models and Google products. For content safety policies generally, including child safety, we saw similar or improved safety performance compared to Gemini 3 Flash. Additionally, the scope of red teaming covered potential issues outside of our strict policies, compared performance to Gemini 3.1 Pro, and found no egregious concerns.

Frontier Safety Assessment

Nano Banana 2.1 is part of the Gemini 3 series of models. To assess Nano Banana 2.1 for frontier safety, we rely on our evaluations of Gemini 3.1 Pro and Gemini 3.7 Flash as outlined in our [Frontier Safety Framework](#). We found that Gemini 3.1 Pro and Gemini 3.7 Flash did not reach any Tracked or Critical Capability Levels (T/CCLs). Our assessments have shown that Nano Banana 2.1 does not have meaningful new capabilities or material increases in performance compared to Gemini 3.1 Pro or Gemini 3.7 Flash, therefore based on these results, we are confident that Nano Banana 2.1 is also unlikely to reach any T/CCLs.

For more information on our Frontier Safety Assessment, read the [Gemini 3.1 Pro Model Card](#) and [Gemini 3.7 Flash Model Card](#).

Risks and Mitigations

For more information about the risks and mitigations for the Gemini 3 series, including Nano Banana 2.1, see the Gemini 3.1 Pro [model card](#).