**Introducing Gemini:**

**our largest and most capable AI model**

Today, we announced Gemini — [the most capable general AI model we have ever built](https://blog.google/technology/ai/google-gemini-ai). It is the result of large-scale collaborative efforts by teams across Google, including Google DeepMind and Google Research, and is our largest science and engineering project ever.

We’ve optimized Gemini 1.0, our first version of the model, for three different sizes:

* **Gemini Ultra** — our most capable and largest model for highly-complex tasks
* **Gemini Pro** — our best model for scaling across a wide range of tasks
* **Gemini Nano** — our most efficient model for on-device tasks

**What is Gemini?**

Gemini is a multimodal AI model. This means that it can generalize and seamlessly understand, operate across and combine different types of information, including:

* Text
* Images
* Audio
* Video
* Coding languages

It’s also our most flexible model yet, able to efficiently run on everything from mobile devices to data centers. Gemini will significantly enhance the way developers and enterprise customers build and scale with AI.

**Built on next-generation capabilities**

Until now, the standard approach to creating multimodal models involved training separate components for different modalities and then stitching them together to roughly mimic some of this functionality. These models can sometimes be good at performing certain tasks like describing images, but struggle with more conceptual and complex reasoning.

So we designed Gemini to be natively multimodal — pre-trained from the start on different modalities. Then we fine-tuned it with additional multimodal data to further refine its effectiveness. This helps Gemini seamlessly understand and reason about all kinds of inputs from the ground up, far better than existing multimodal models — and its capabilities are state-of-the-art in nearly every domain.

Learn more about [Gemini’s capabilities and see how it works](http://deepmind.google/gemini).

**Benchmarking tests**

We've been rigorously testing our Gemini models and evaluating their performance on a wide variety of tasks. From natural image, audio and video understanding to mathematical reasoning, Gemini Ultra’s performance exceeds current state-of-the-art results on 30 of the 32 academic benchmarks widely used in large language model research and development.

You can see more details in [our technical whitepaper](https://storage.googleapis.com/deepmind-media/gemini/gemini_1_report.pdf).

**Making Gemini available to the world**

Gemini 1.0 is now rolling out across a range of products and platforms:

***For consumers***

* Starting today, [Bard — using  a fine-tuned version of Gemini Pro](https://blog.google/products/bard/google-bard-try-gemini-ai) — will be available in English in more than 170 countries and territories. It will be far more capable at things like understanding and summarizing, reasoning, brainstorming, writing and planning. This is the biggest single upgrade to Bard since we launched;
* And in the coming months, Gemini will be available in more of our core products and services like Search, Ads, Chrome, and Duet AI.

***For developers***

* Starting on December 13, developers and enterprise customers can access Gemini Pro via the Gemini API in Google AI Studio and Vertex AI:
  + Google AI Studio is a free, web-based developer tool that helps developers and enterprise customers prototype and launch apps quickly with an API key;
  + When it's time for a fully-managed AI platform, Vertex AI allows customization of Gemini with full data control and benefits from additional Google Cloud features for enterprise security, safety, privacy, and data governance and compliance.
* Android developers will also be able to build with Gemini Nano, our most efficient model for on-device tasks, via AICore. AICore is a new system capability available in Android 14, starting on Pixel 8 Pro devices. Sign up for an [early preview](https://android-developers.googleblog.com/2023/12/a-new-foundation-for-ai-on-android.html).
* And as part of our extensive trust and safety checks for Gemini Ultra, we will make it available to select customers, developers and partners for early experimentation and feedback before making it broadly available to developers and enterprise customers early next year
  + Early next year, we’ll also launch [Bard Advanced](https://blog.google/products/bard/google-bard-try-gemini-ai), a new, cutting-edge AI experience that gives you access to our best models and capabilities, starting with Gemini Ultra.

**Looking ahead**

This is a significant milestone in the development of AI, and the start of a new era for us at Google as we continue to rapidly innovate and responsibly advance the capabilities of our models. We’ve made great progress on Gemini so far and we’re working hard to further extend its capabilities for future versions.

**Assets**

In [this doc](https://drive.google.com/drive/folders/1NW5r235HjMFRrxRNUlvu1QWwt88-Yb_a)