

The top technical challenges affecting Generative AI development

Generative AI holds the potential to disrupt how we live, play, work, and innovate. But there are still technical challenges to overcome before it can unlock all the capabilities of the world's datasets.

1

MASSIVE COMPUTATIONAL RESOURCES

Generating original content from huge inventories of data takes serious computing power.

800 petaflops

It reportedly took 800 petaflops of compute power to train OpenAI's ChatGPT-3.

SOLVE IT

Cover most common requests from users using a smartphone optimized LLM (7B/8B) based on an existing model, instead of a server-grade LLM that uses huge resources in every request.

2

HIGH POWER CONSUMPTION

It's power and energy intensive to support the computational needs of Generative AI. The associated energy costs are an unsustainable barrier to Generative AI development.

1GWh per day

It's estimated to take 1GWh per day to run a chat app like ChatGPT-3.

SOLVE IT

It's more energy efficient, and sustainable, to use Generative AI on a smartphone. Look for one powered by **MediaTek's 7th Generation NPU** that provides substantial energy savings and incredible speed boosts.

27x greater power efficiency compared with a typical CPU

15x greater power efficiency compared with a typical GPU

3

CONNECTIVITY AND LATENCY

Real-time Generative AI applications, like virtual assistants or video game characters, can face connectivity and latency challenges that create lag or even completely interrupt the user experience.

SOLVE IT

At MediaTek, we are building a future where more and more Generative AI applications can be processed right on the device, instead of relying on cloud service and unguaranteed internet connectivity.

4

DATA PRIVACY

When Generative AI models are hosted in the cloud, your content can be seen by service owners. Users might not be aware they are uploading sensitive personal data, like medical information; or corporate data, like proprietary datasets.

SOLVE IT

Edge AI by MediaTek helps preserve privacy by keeping your sensitive data on-device, without needing to upload it to cloud services.

About MediaTek

As the industry leader in developing high performance and power-efficient system-on-chip products from smartphones to smart homes, MediaTek is already bringing the benefits of our powerful, in-house designed AI processors into our diverse product ecosystem. We now ship over 2 billion chips in connected devices every year, most of which contain our AI processors, making us one of the world's leading edge AI suppliers.

MEDIATEK

Discover our Generative AI technology

Learn More

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