

Key Points on Large Language Models (LLMs)

1. What is an LLM?

A Large Language Model (LLM) is an artificial intelligence model trained on vast amounts of textual data to understand, generate, and manipulate human-like language.

2. Popular LLM Examples

- OpenAI GPT (ChatGPT)
- Google Gemini
- Anthropic Claude
- Meta LLaMA
- Mistral

3. Core Capabilities of LLMs

- Text generation and summarization
- Language translation
- Question-answering
- Code completion and generation
- Sentiment analysis and conversation understanding

4. How LLMs Work

LLMs are trained using deep learning techniques (mainly transformers) and process input/output in tokens (which represent chunks of words). They learn from diverse text sources like books, articles, and websites.

5. Interaction Method

LLMs use a prompt-based system, where users input a request (prompt), and the model generates a relevant response.

6. Real-World Applications

- AI-powered chatbots and assistants

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- Educational tools and tutoring
- Programming help and automation
- Content creation and summarization
- Data analysis and customer support

7. API Access & Integration

LLMs are accessed through APIs (e.g., OpenAI API, Gemini API) and can be integrated with apps or used via SDKs like the OpenAI Agents SDK.

8. Free Tier Rate Limits (as of 2025)

Platform	Daily Requests (RPD)	Requests/Min (RPM)	Tokens/Min (TPM)
Google Gemini Flash	1,500	15	1,000,000
Gemini Flash-Lite	1,500	30	1,000,000
OpenRouter (Free Models)	200	~20	Limited

9. Limitations of LLMs

- May generate incorrect or biased information (hallucination)
- Require high computation power
- Limited understanding of real-time context

10. Summary

LLMs are powerful AI tools with wide applications in language understanding and generation. With increasing compatibility and API access, developers can build intelligent systems quickly. However, ethical use and awareness of their limitations are essential.