

01 - Research Task

Basic Understanding of Agentic AI

Agentic AI kya hai?

Agentic AI aik advanced AI approach hai jisme multiple AI "agents" hotay hain jo independently decision le saktay hain, action perform kar saktay hain, aur tasks solve kar saktay hain. Ye agents apne goals ko achieve karne ke liye reasoning, planning, aur execution kerte hain – bilkul aik intelligent insaan ki tarah. Ye aik shift hai Generative AI se, jo sirf text/image generate karti thi, towards AI agents jo **goal-oriented tasks** perform kartay hain.

What are LLMs (Large Language Models)?

LLMs kya hai?

Large Language Models jaise ke GPT (Generative Pre-trained Transformer) aik type ke deep learning model hotay hain jo massive text datasets per train kiye jatay hain. Ye models context samajh ke naya text generate kar saktay hain, questions ka jawab de saktay hain, summaries likh saktay hain, aur creative content produce kar saktay hain.

Ye kaam transformers architecture ke zariye hota hai, jisme attention mechanism use hota hai takay model input ka meaningful part identify ker sake.

What is Generative AI?

Generative AI kya hai?

Generative AI aik AI category hai jo **content generate** karti hai — jaise text, images, audio, aur even video. Iska famous example ChatGPT hai jo LLMs use karke natural-looking text likhta hai. Generative AI ka goal **data ke basis pe nayi cheezein banana** hota hai.

Difference Between Generative AI and Agentic AI

Feature	Generative AI	Agentic AI
Output	Text, images, code, etc.	Actions, decision-making, task-solving
Goal-oriented?	No (reactive)	Yes (proactive + reactive)
Independence	Executes 1 prompt at a time	Agents act independently or in groups
Multi-step reasoning	Limited	Advanced and coordinated

Understand the difference between Generative AI and Agentic AI:

Generative AI sirf **aapka kehna maanti hai** (e.g., likh do essay ya code), jabke Agentic AI khud **soch kar** kaam karti hai, goals set karti hai, aur multiple agents mil kar aik bada task complete kar saktay hain. Yeh aik **more intelligent and autonomous system** hai.



What is OpenAI's Agents SDK?

Agents SDK kya hai?

OpenAI ka Agents SDK aik **toolkit/framework** hai jo developers ko multi-agent systems banane mein madad deta hai. Iska matlab yeh hai ke aap multiple AI agents define kar saktay hain jo **collaboratively** tasks solve kartay hain — aur yeh sab kuch structured aur scalable way mein hota hai.

SDK mein kuch key features hain:

- **Agents:** Ye independent functions hain jo specific kaam kartay hain.
- **Handoffs:** Control transfer karna ek agent se doosray agent ko.
- **Tools & Memory:** Har agent ke paas apna toolset aur memory ho sakti hai.
- **Guardrails:** Behavior control karne ke liye rules ya boundaries.

Kion use karte hain?

- Complex tasks ko easily manage karne ke liye.
- Collaboration between agents possible hoti hai.
- Scalable architecture provide karta hai.
- Real-world use cases like customer service, automation, research assistants, etc.