# Al Multi-Agent Systems: Swarm aur Agents SDK

Yeh presentation OpenAl ke Swarm framework aur uske mutawalli Agents SDK par tawajjo degi, jo multi-agent systems ko samajhne mein madad karegi. Hum asaan alfaz mein inke buniyadi tasawwurat aur unke kaam karne ke tarike ko dekhenge.







## Swarm Kya Hai?



## Multi-Agent Orchestration

Yeh mukhtalif Al agents ke darmiyan coordination banata hai.



## **Lightweight aur Ergonomic**

Iski design halke wazan aur istemal mein asaan hai.



#### **Agents aur Handoffs**

Do buniyadi concepts hain: 'Agents' kaam karte hain, aur 'Handoffs' kaam ko dusre agent ko dete hain.

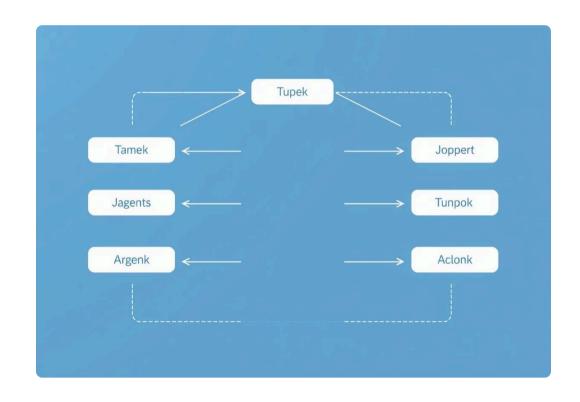
### **Swarm Kaam Kaise Karta Hai?**

#### Har Agent Ka Role

Har agent ka apna khaas kaam aur zimmedari hoti hai.

#### Handoffs Se Kaam Assign

Mushkil kaam ko behtar tareeqay se hal karne ke liye specialist agent ko diya jata hai.



Is tarah, jaise customer service mein, agar ek agent masle ko hal nahi kar pata, toh woh usse zyada mahir agent ko forward kar deta hai.

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# SDK

# **OpenAl Agents SDK: Agla Qadam**



#### **Swarm Ka Improved Version**

Swarm ke tajurbati kamyabiyon par mabni hai.



#### **Production-Ready SDK**

Yeh ab real-world applications ke liye tayyar hai.



#### **Complex Al Workflows**

Bade aur pechida Al processes ko behtar tareeqay se manage karta hai.

# Design Patterns: Anthropic Se Ilhaam

#### **Prompt Chaining**

Kaam ko chote, asaan steps mein todna.

#### Routing

Sahi agent ko sahi kaam assign karna.

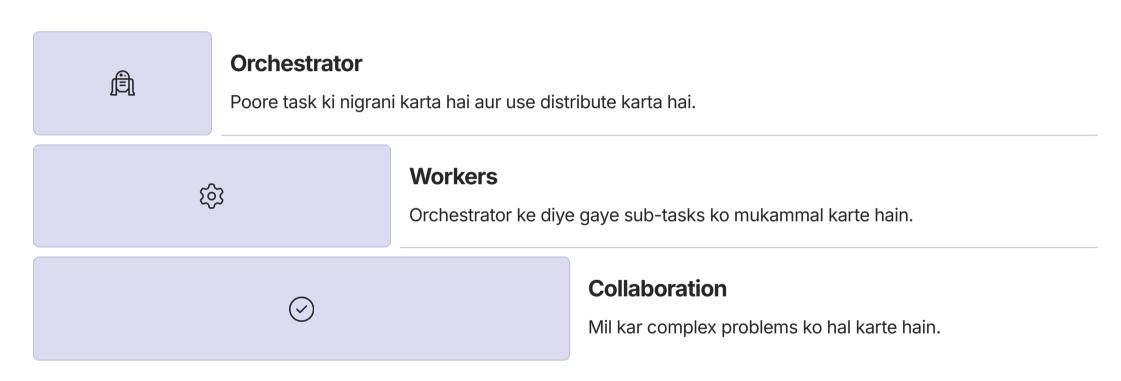
#### **Parallelization**

Mukhtalif kaamon ko ek sath chalana.

Yeh patterns Anthropic ke tajurbat se musta'ar hain, jo Al system design mein ahmiyat rakhte hain.

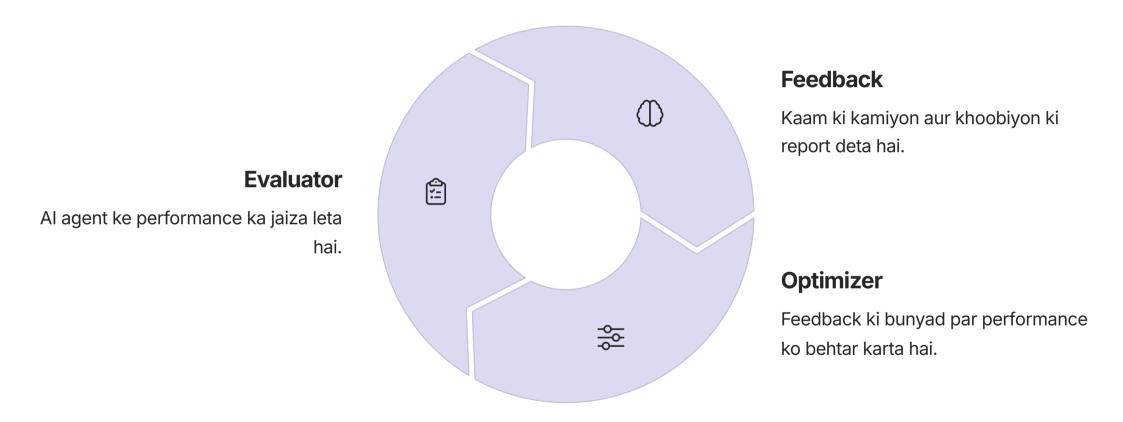


### **Orchestrator-Worker Model**



Yeh model efficiency aur scalability ke liye bohot zaroori hai, jahan ek central unit mukhtalif agents ko manage karta hai.

### **Evaluator-Optimizer Pattern**



Yeh pattern Al systems ko musalsal seekhne aur behtar hone mein madad karta hai, bilkul insani feedback loop ki tarah.



### Mustaqbil Ke Liye Buniyad

Swarm aur Agents SDK ne multi-agent Al systems ko zyada asardar banaya hai.

1

2

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**Efficient Systems** 

**Powerful Base** 

Al workflows ko sudhara hai.

Future Al applications ke liye mazboot buniyad rakhi hai.

**Al Innovation** 

Al mein naye darwaze khole hain.

Yeh frameworks AI research aur development ke liye aik ahem qadam hain.

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