

AUTOGEN

AutoGen is an open-source programming framework for building AI agents and facilitating cooperation among multiple agents to solve tasks.

It turns isolated AI models into a team of intelligent agents working together. AI models (like ChatGPT) are powerful, but usually work alone. AutoGen manages multiple agents by:

- Allowing multiple agents to talk to each other.
- Giving each agent a custom role and goal.
- Making it easy to automate multi-step tasks without

Key Concepts

1. Agents

Each agent is a separate brain with its own job

- UserProxyAgent: Simulates human user's intent
- AssistantAgent: Like ChatGPT, generates text/code
- CodeExecutorAgent: Can run Python code
- CriticAgent: reviews outputs for correctness

2. Group Chat

Defines how the agents interact.

- Who talks to who
- When to stop conversation

- Which agent can or cannot do
3. Task Automation.
 - Picks the right agents,
 - Produce a final result - like code, data, or answer.

Use Cases

1. AI software development teams : code generation, debugging and reviewing.
2. Data Analysis
3. Automated Research : search the web, summarize result and generate reports
4. Document Generation.
5. Chatbot teams :

Key Features

1. Asynchronous messaging :
Agents communicate through asynchronous messages, supporting both events-driven and request/response interaction patterns.
2. Scalable and distributed :
Users can design complex, distributed agent networks that operate seamlessly across organizational boundaries.
3. Full type Support :
Interfaces now enforce type checks at build time, ensuring robust and cohesive code quality.