

# Creating and Using Tools in Autogen Agents

In autogen, agents powered by large language models can perform reasoning, interact with one another and solve complex tasks. LLMs are not inherently capable of performing actions like querying a database, calling APIs or doing calculation. To bridge this, we use python functions as tools. Tools are simply Python Function that agents call as part of its reasoning. They are not just static functions, they represent interactive capabilities.

Autogen uses a special decorator called `@register_function` to make functions visible to agents. This.

- Registers the function globally within agent ecosystem.
- Allows autogen to automatically extract :
  - Function name
  - Arguments types
  - Description
- LLM agents plan when and how to use the tool.

The LLM interprets the task, matches it a tool based on its name and description and autonomously forms and executes the appropriate function call.

Different from plain function calling, In autogen, the agent, not the developer, decides when and how to call functions. Key advantages are tools add modularity, reusability and external access to agents.