

Popular Built-in Tools in LangChain

Estimated time: 5 minutes

LangChain offers a variety of built-in tools designed to enhance AI agent capabilities across search, coding, web browsing, productivity, and more. These tools work seamlessly with language models, allowing for dynamic task execution. This guide explores popular tools and toolkits categorized by use case, including notes on availability and pricing.

In this reading, you will identify key built-in tools and toolkits available in LangChain and understand the purpose and function of each tool within its use case category. You will also compare multiple search and data analysis tools to determine their ideal applications and evaluate whether a tool requires payment or is freely accessible based on official documentation.

Tools and toolkit

Tools are utilities designed to be called by a model: their inputs are designed to be generated by models, and their outputs are designed to be passed back to models.

A **toolkit** is a collection of tools meant to be used together.

One thing to keep in mind is that some tools may be paid and some free. It is advised that check if the tool is free or not on the [official documentation](#).

List of built-in tools in Langchain

Below is the list of popular built-in tools in Langchain based on use cases:

1. Search tools

| Tool/Toolkit | Function | Purpose |
|---------------|-----------------------|--|
| SerpAPI | Web search | Performs web searches and returns answers |
| Google Search | Web search | Executes Google searches and returns URLs, snippets, and titles |
| Tavily Search | AI-optimized search | Search engine built specifically for AI agents. Returns URLs, content, titles, images, and answers |
| Wikipedia | Knowledge base search | Searches Wikipedia articles and returns relevant information and summaries |

2. Code interpretation and data analysis

| Tool/Toolkit | Function | Purpose |
|----------------------|--------------------------|--|
| Python REPL | Code execution | Executes Python code for complex calculations, data analysis, and automation |
| Pandas DataFrame | Data manipulation | Enables agents to interact with and analyze tabular data in Pandas DataFrames |
| SQL Database Toolkit | Database querying | Allows agents to query and manipulate SQL databases using natural language. Returns URLs, content, titles, images, and answers |
| LLMMathChain | Mathematical computation | Solves mathematical problems by translating them to Python code and evaluating them |
| JSON Toolkit | JSON manipulation | Helps agents interact with large JSON/dictionary objects efficiently |

3. Web browsing and interaction

| Tool/Toolkit | Function | Purpose |
|--------------------|--------------------|--|
| Requests Toolkit | HTTP requests | Constructs HTTP requests to interact with web APIs and fetch web content |
| PlayWright Browser | Browser automation | Controls web browsers to navigate websites and interact with web pages |

| Tool/Toolkit | Function | Purpose |
|-----------------|-------------------------|--|
| MultiOn Toolkit | Web app interaction | Enables AI agents to interact with popular web applications |
| ArXiv | Scientific paper search | Searches and retrieves scientific papers from the arXiv repository |

4. Productivity and collaboration

| Tool/Toolkit | Function | Purpose |
|-------------------|----------------------------|--|
| Gmail Toolkit | Email management | Allows reading, sending, and managing emails through Gmail |
| Office365 Toolkit | Office suite integration | Interacts with Microsoft 365 applications, including Outlook, OneDrive, etc. |
| Slack Toolkit | Team communication | Enables sending and reading messages in Slack channels and direct messages |
| Github Toolkit | Code repository management | Manages repositories, issues, pull requests, and other GitHub features |
| Google Calendar | Calendar management | Creates, reads, and updates calendar events in Google Calendar |

5. File and document processing

| Tool/Toolkit | Function | Purpose |
|------------------|-----------------------|--|
| File System | Local file operations | Interacts with local file system to read, write, and manage files |
| Google Drive | Cloud storage | Connects to Google Drive to access, search, and manage cloud files |
| VectorStoreQA | Document querying | Queries information from documents stored in vector databases |
| Document Loaders | Content extraction | Extracts content from various document formats (PDF, DOCX, etc.) |

6. Financial and business tools

| Tool/Toolkit | Function | Purpose |
|---------------|------------------------|---|
| Yahoo Finance | Financial news | Retrieves financial news articles and market information |
| GOAT | Financial transactions | Creates/receives payments, purchases goods, and makes investments |
| Polygon IO | Market data | Provides real-time and historical market data for stocks, options, etc. |
| Stripe | Payment processing | Manages payments, subscriptions, and other e-commerce functions |

7. AI and machine learning integration

| Tool/Toolkit | Function | Purpose |
|------------------------|----------------------------|---|
| Dall-E Image Generator | Image creation | Generates images from text descriptions using OpenAI's Dall-E models |
| HuggingFace Hub Tools | Model access | Connects to various machine learning models hosted on HuggingFace |
| Google Imagen | Image generation | Accesses Google's image generation capabilities through Vertex AI |
| Nuclia Understanding | Unstructured data indexing | Indexes unstructured data from various sources for enhanced retrieval |

Summary

In this reading, you learned that:

- LangChain integrates tools and toolkits to extend the functionality of language models across diverse use cases such as search, data analysis, web browsing, and productivity.
- Each tool serves a specific function—for example, SerpAPI performs web searches, while the Python REPL executes code for data analysis or automation.
- Toolkits group related tools (for example, SQL Database Toolkit or Gmail Toolkit), enabling more complex task orchestration within a single interface.
- Some tools are free, and others require payment. Always verify the pricing and availability through the official documentation before integration.
- Use case-specific tools (for example, Tavily for AI-optimized search or MultiOn for web app interaction) help tailor LangChain applications to real-world business or research needs.

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