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
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.

Author(s)

IBM Skills Network Team