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Trusted by companies shaping the future of agents – including Klarna, Replit, Elastic, and more – LangGraph is a low-level orchestration framework for building, managing, and deploying long-running, stateful agents.

#### Get started

Install LangGraph:

```
pip install -U langgraph
```

Then, create an agent using prebuilt components:

```
# pip install -qU "langchain[anthropic]" to call the model

from langgraph.prebuilt import create_react_agent

def get_weather(city: str) -> str:
    """Get weather for a given city."""
    return f"It's always sunny in {city}!"

agent = create_react_agent(
    model="anthropic:claude-3-7-sonnet-latest",
    tools=[get_weather],
    prompt="You are a helpful assistant"
)

# Run the agent
agent.invoke(
    {"messages": [{"role": "user", "content": "what is the weather in sf"}]}
)
```

For more information, see the <u>Quickstart</u>. Or, to learn how to build an <u>agent workflow</u> with a customizable architecture, long-term memory, and other complex task handling, see the <u>LangGraph basics tutorials</u>.

# Core benefits

LangGraph provides low-level supporting infrastructure for *any* long-running, stateful workflow or agent. LangGraph does not abstract prompts or architecture, and provides the following central benefits:

- <u>Durable execution</u>: Build agents that persist through failures and can run for extended periods, automatically resuming from exactly where they left off.
- <u>Human-in-the-loop</u>: Seamlessly incorporate human oversight by inspecting and modifying agent state at any point during execution.
- <u>Comprehensive memory</u>: Create truly stateful agents with both short-term working memory for ongoing reasoning and long-term persistent memory across sessions.

- <u>Debugging with LangSmith</u>: Gain deep visibility into complex agent behavior with visualization tools that trace execution paths, capture state transitions, and provide detailed runtime metrics.
- <u>Production-ready deployment</u>: Deploy sophisticated agent systems confidently with scalable infrastructure designed to handle the unique challenges of stateful, long-running workflows.

# LangGraph's ecosystem

While LangGraph can be used standalone, it also integrates seamlessly with any LangChain product, giving developers a full suite of tools for building agents. To improve your LLM application development, pair LangGraph with:

- <u>LangSmith</u> Helpful for agent evals and observability. Debug poor-performing LLM app runs, evaluate agent trajectories, gain visibility in production, and improve performance over time.
- <u>LangGraph Platform</u> Deploy and scale agents effortlessly with a purpose-built deployment platform for long running, stateful workflows. Discover, reuse, configure, and share agents across teams and iterate quickly with visual prototyping in <u>LangGraph Studio</u>.
- LangChain Provides integrations and composable components to streamline LLM application development.

#### (i) Note

Looking for the JS version of LangGraph? See the JS repo and the JS docs.

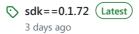
## Additional resources

- <u>Guides</u>: Quick, actionable code snippets for topics such as streaming, adding memory & persistence, and design patterns (e.g. branching, subgraphs, etc.).
- Reference: Detailed reference on core classes, methods, how to use the graph and checkpointing APIs, and higher-level prebuilt components.
- Examples: Guided examples on getting started with LangGraph.
- LangChain Academy: Learn the basics of LangGraph in our free, structured course.
- <u>Templates</u>: Pre-built reference apps for common agentic workflows (e.g. ReAct agent, memory, retrieval etc.) that can be cloned and adapted.
- Case studies: Hear how industry leaders use LangGraph to ship AI applications at scale.

# Acknowledgements

LangGraph is inspired by <u>Pregel</u> and <u>Apache Beam</u>. The public interface draws inspiration from <u>NetworkX</u>. LangGraph is built by LangChain Inc, the creators of LangChain, but can be used without LangChain.

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Python 94.1%
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