

|                    | LangGraph                                                                                               | CrewAI                                                                                                                                                                         | AutoGen                                                                                                                          | Semantic Kernel                                                                                                                                                          | LlamaIndex                                                                                                                                     |
|--------------------|---------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Language           | Python                                                                                                  | Python                                                                                                                                                                         | Python and .NET                                                                                                                  | C#, Python, and Java                                                                                                                                                     | Python                                                                                                                                         |
| Workflow style     | Graph-based; cyclical and stateful, with loops and conditional execution paths                          | Role-based "crew" metaphor; agents assigned to tasks within a process (sequential and hierarchical)                                                                            | Event-driven, three-layer architecture: Core (event-driven messaging), AgentChat (high-level conversational API), and Extensions | Plugin-based; hooks and filters for observability and responsible AI, with built-in telemetry                                                                            | Event-driven workflow model; agents respond to events, execute steps, and emit new events for downstream processing, with dynamic looping      |
| License            | MIT                                                                                                     | Open-source                                                                                                                                                                    | Open-source (stated directly)                                                                                                    | Open-source                                                                                                                                                              | Open-source                                                                                                                                    |
| Ecosystem maturity | Part of the broader LangChain ecosystem, which sees more than 100 million monthly open-source downloads | Backed by more than 100,000 developers                                                                                                                                         | Already used in production alongside Semantic Kernel                                                                             | Used internally by Microsoft and other Fortune 500 companies                                                                                                             | 25M+ package downloads a month, 1.5k+ contributors, 20k+ community members                                                                     |
| Ideal use case     | Complex stateful agents requiring conditional branching, human-in-the-loop gates, and persistent state  | Sequential and lightly hierarchical multi-agent workflows where speed of prototyping and readable agent definitions matter more than fine-grained control over execution paths | Research, prototyping, and teams already invested in AutoGen patterns who want to migrate to Microsoft Agent Framework over time | Microsoft-standardized enterprises in regulated industries (financial services, healthcare, government) that need type safety, compliance tooling, and Azure integration | Data-heavy retrieval agents, knowledge base assistants, and RAG-powered applications where retrieval quality is the primary performance driver |