Building AI Agents

Duration: 2 days Price: € 1499

Open Schedule


Building AI Agents


Audience Course Building AI Agents

The course Building AI Agents is intended for software developers, data scientists, and AI practitioners who want to learn how to design autonomous agents using LLM's.

Prerequisites Building AI Agents Course

To participate in this course, a basic understanding of Python programming and machine learning concepts is required. Familiarity with APIs and prompt engineering is useful.

Realization Training Building AI Agents

The course is conducted under the guidance of the trainer, combining theory with hands-on exercises. Real-world examples and practical case studies are used throughout the training.

Building AI Agents Certificate

After successfully completing the course, participants will receive a certificate of participation in Building AI Agents.

Content Building AI Agents

The course Building AI Agents from SpiralTrain teaches you to build intelligent AI agents that reason, act, and collaborate autonomously. You'll work with tools like LangChain and CrewAI, explore agent memory, workflows, and real-world use cases, and dive into the future of AI agent ecosystems.

Intro AI Agents

The course begins with a look at what AI agents are, how they differ from chatbots, and their core components like autonomy and decision-making. It covers LLMs as reasoning tools, agent frameworks like LangChain, memory usage, tools, and common challenges.

LangChain Fundamentals

This module explores the LangChain architecture. Topics include chains vs agents, templates, memory modules, document loaders, streaming output, tool integration, and how to debug agents using LangSmith.

Building First Agent

Learn to create your first AI agent by choosing a model, setting goals, integrating tools, managing memory, and writing effective prompts. Also covered: error handling, multi-step tasks, personality, and monitoring output.

Multi-Agent Systems

Participants explore collaboration between agents using frameworks like CrewAI and Autogen. The module covers roles, messaging, goal refinement, workflow monitoring, task decomposition, and evaluation techniques.

Agent Use Cases

Dive into real-world applications like coding assistants, customer service bots, finance and research agents, enterprise tasks, web deployment, Slack integration, and analytics to assess impact and improve performance.

Future of AI Agents

The course ends with trends in AI agents—self-improvement, real-time sensing, ethical concerns, memory growth, regulation, and human-agent teamwork. It also looks at future marketplaces and safety controls.

Modules Building AI Agents

Module 1: Intro AI Agents	Module 2: LangChain Fundamentals	Module 3: Building First Agent
What is an AI agent?	LangChain Architecture	Choosing an LLM
Core Components	Chains and Agents	Defining Goals and Actions
Autonomy and Decision Making	Prompts and Templates	Using Tools (search, calculator)
Agents vs Chatbots	Tool Integrations	Writing Prompts for Agents
Key Frameworks (LangChain, Auto-GPT)	Document Loaders	Handling Errors and Retries
LLMs as Reasoning Engines	Memory Modules	Adding Personality
Tools and APIs	Output Parsers	Managing State and Memory
Role of Memory	Streaming Output	Multi-step Tasks
Agent Use Cases	Agent executors	Logging and Monitoring
Challenges and Risks	LangSmith for Debugging	Sandbox Environments
Module 4: Multi-Agent Systems	**Module 5: Agent Use Cases**	**Module 6: Future of AI Agents**
Collaboration Between Agents	Coding Assistant	Self-Improving Agents
CrewAI and Autogen Overview	Research Assistant	Memory Evolution
Roles and Responsibilities	Personal Finance Agent	Real-time Environment Sensing
Message Passing between Agents	Enterprise Task Agent	AI Decision Making
Task Decomposition	AI Bots for Customer Support	Simulated Personalities
Goal Refinement	Integrating with Slack/Teams	Ethics and Control
Monitoring Progress	Running on the Web	Guardrails and Safety
Conflict Resolution	Continuous Learning Agents	Regulation Implications
Complex Workflows	Logging and Analytics	Agent Marketplaces
Evaluation Strategies	Measuring Impact	Agent + Human Collaboration