

Agentic **AI**: Design, **Deploy** & Monitor AI **Agents**

AI AGENT LIFECYCLE

BUILD • DEPLOY • MONITOR

About Our Agentic AI Programme

- An intensive **16-hour, hands-on programme** offered by **Cogent University**.
- Covers the complete AI agent lifecycle from **design and development to deployment, monitoring and optimization**.
- Learn to build intelligent AI agents with **reasoning, planning, memory and tool-use capabilities**.
- Gain practical experience with **Python, LangChain, OpenAI Assistants, vector databases and FastAPI or Flask**.
- Design structured agent workflows using techniques such as **ReAct and plan-and-execute**.
- Integrate external APIs, functions, tools and **short-term and long-term memory systems**.
- Build and deploy functional AI agents as **live APIs and enterprise-ready services**.
- Implement monitoring, logging, validation, safety guardrails and rate limits for reliable agent operations.
- Explore deployment approaches across **cloud, on-premises and hybrid environments**.
- Learn strategies for improving **performance, scalability, security, latency and cost efficiency**.
- Ideal for **AI/ML engineers, data professionals, software developers, solution architects, product managers and innovation teams**.
- Develop the practical skills required to create **secure, scalable and production-ready AI solutions**.

Design **intelligently**.
Deploy **confidently**.
Monitor **continuously**.

Program Details :
Course Duration: 16 hours
Fees - \$699

Why This Programme Matters

The Rise of Agentic AI

79%

of US companies are already adopting AI agents.

(Source: PwC AI Agent Survey 2025)

88%

of US executives plan to increase AI-related budgets because of Agentic AI.

(Source: PwC AI Agent Survey 2025)

66%

of companies adopting AI agents report measurable productivity improvements.

(Source: PwC AI Agent Survey 2025)

56% Wage Premium

Professionals with AI skills earned an average **56% wage premium** compared with similar roles that did not require AI skills.

55%

of AI agent adopters report faster and more effective decision-making.

(Source: PwC AI Agent Survey 2025)

53%

of companies are already using or plan to use AI agents in IT and cybersecurity.

(Source: PwC AI Agent Survey 2025)

67%

of US executives believe AI agents will significantly transform existing job roles within the next 12 months.

(Source: PwC AI Agent Survey 2025)

73%

believe their use of AI agents will create a significant competitive advantage.

(Source: [PwC AI Agent Survey 2025](#))

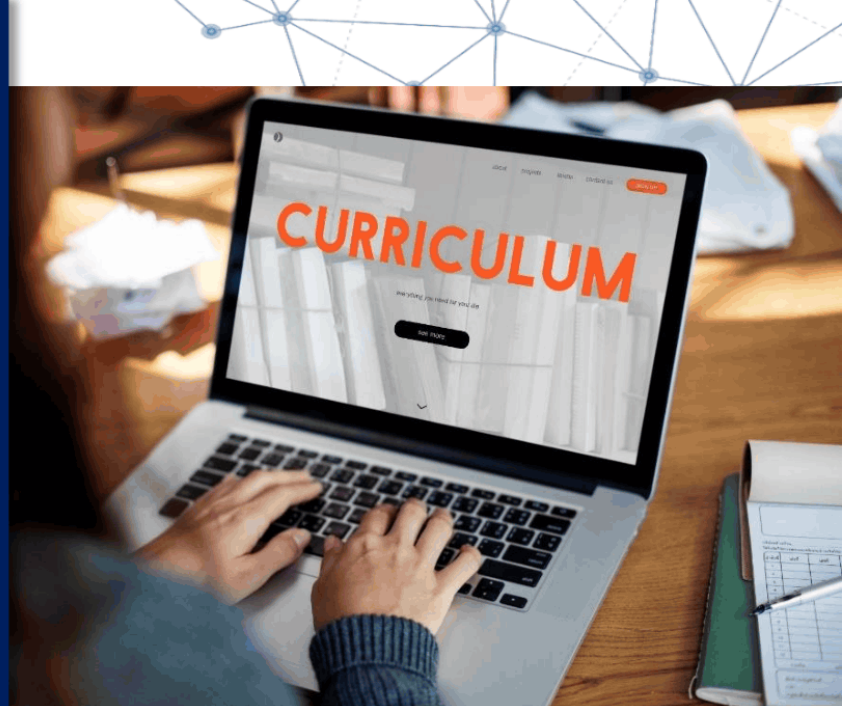
Programme Features

- ✓ Live Instructor-Led Classes
- ✓ Hands-On Practical Sessions
- ✓ Industry-Relevant Capstone Project
- ✓ Real-World Agentic AI Use Cases
- ✓ Certificate of Completion
- ✓ Cogent University Alumni Status





Course Curriculum



Module 1:

Understanding **Agentic AI**

- What makes an AI agent "agentic"
- Reasoning, planning, autonomy, and tool use
- Key components of an agentic system
- Real-world applications and industry examples

Module 2:

Designing **AI Agents**

- Defining goals, constraints, and workflows
- Planning mechanisms (ReAct, plan-and-execute, toolformer logic)
- Tool selection and API integration
- Memory design: short-term vs long-term
- Hands-on: Draft an agent design blueprint





Module 3:

Building Agentic Workflows

- Framework overview: LangChain, OpenAI Assistants, custom architectures
- Creating structured system prompts
- Adding tools, functions, and external APIs
- Implementing memory with vector embeddings
- Hands-on: Build a functional agent with tool-use and memory

Module 4:

Deploying AI Agents

- Packaging agents using FastAPI or Flask
- Exposing an agent as an API endpoint
- Containerization basics with Docker
- Deployment approaches (cloud, on-prem, hybrid)
- Hands-on: Deploy an agent as a live API



Module 5:

Monitoring & Observability

- Logging and monitoring best practices
- Tracking agent actions, decisions, and tool calls
- Guardrails: validation, safety layers, rate limits
- Troubleshooting failures and debugging agent behavior
- Hands-on: Implement monitoring for an agent API



Module 6:

Optimization, Scalability & Governance

- Latency and cost optimization strategies
- Parallelization and batching
- Secure API handling and compliance
- Scaling agents for enterprise workloads
- Hands-on: Optimize an existing agent for performance



Cogent University Alumni Benefits

Upon successful completion of the programme, participants become part of the **Cogent University Alumni Network** and receive exclusive benefits:

15% off

their next Cogent University course

20% off

H2H products

30% off

Cogent's placement services

- Access to exclusive alumni webinars and learning sessions
- Professional networking and peer collaboration opportunities
- Regular industry insights, career resources and programme updates

Certificate of Completion

Cogent University encourages participants to demonstrate active engagement, intellectual curiosity and a strong commitment to learning throughout the programme. Participants are expected to attend all live sessions, complete the assigned hands-on activities and successfully submit the capstone project.

The **Certificate of Completion** will be awarded only to participants who fulfil the required attendance, participation and programme evaluation criteria.

Throughout the programme, participants are encouraged to apply the knowledge and skills gained through practical exercises, collaborative discussions and real-world problem-solving. Successful completion reflects their dedication to continuous learning, ability to translate concepts into practical outcomes, and readiness to apply their learning in professional environments.



Who Is This Programme For?

This course is designed for you if you are:



An AI/ML Engineer exploring Agentic AI



A Data Scientist or Data Engineer building AI-powered solutions



A Developer creating copilots, automation, or intelligent applications



A Solution Architect designing AI systems



A Technical Product Manager working on AI products



Part of an Innovation, Automation, or R&D team



Students Testimonial?



The instructor and HR Personnel were always there to answer our questions. We also had a Skill Enhancement and mock interview sessions after our 8-week training.

- Jerrel Siler

They have a very good training program for fresh graduates. They helped grow my skills and lined me up with multiple interviews a week to secure job opportunities.

- Moraa Onwonga



The program at Cogent University significantly shortened my job search as a software developer and helped me blend into my new work environment with ease. The model works as long as you play your part.

- Fabrice Bayoro

The instructors were all very knowledgeable and gave us lots of practice problems and guidance. There was rarely a question they couldn't answer.

- Fletcher Wilmott



Ready to Build Your First Production-Ready AI Agent?

Learn the complete **Agentic AI lifecycle** in one focused, hands-on program.



Live Cohort Starts:
October 10, 2026

Weekend Live Classes: Saturday & Sunday
Class Duration: 3 Hours Per Day

**Special
Launch Offer**

~~\$799~~

\$699

Enrol in our first live cohort and receive a **\$100 Launch Discount**.



About Cogent Infotech & Cogent University

Building Future-Ready Businesses and Technology Careers

For more than two decades, **Cogent Infotech** has helped organizations and professionals succeed in an evolving digital economy. Through expertise in AI/ML, cloud services, cybersecurity, application development, SAP solutions and workforce services, Cogent delivers technology solutions and skilled talent to Fortune 500 companies, government agencies and enterprises across industries.

Cogent University, established in 2011, extends this mission by preparing technology professionals with the practical skills employers need. Its learning approach combines instructor-led training, hands-on projects, industry mentorship, career preparation and access to Cogent's extensive talent network. Together, Cogent Infotech and Cogent University connect the complete ecosystem from developing in-demand technical capabilities to supporting digital transformation and creating meaningful career opportunities.

- ✓ **22+ years** of industry experience
- ✓ **10,000+ projects** successfully completed
- ✓ **150+ US government contracts**
- ✓ **70+ Fortune 500 companies** served
- ✓ **1,650+ students** trained and mentored
- ✓ **3,500+ career opportunities** delivered
- ✓ **500+ active hiring partners**
- ✓ **\$82K average salary** offered

Cogent combines real-world industry experience with career-focused learning, offering practical projects, expert guidance, professional development and career support. Its quality and delivery standards are reinforced by **CMMI Level 3**, **ISO 9001**, **ISO 20000** and **ISO 27001** credentials.

From building future-ready businesses to developing future-ready professionals, Cogent turns technology potential into measurable progress.

Sources: [Cogent Infotech](#) | [Cogent University](#)