

CTR-819 AI Automation with Microsoft Copilot, RAG Bots & Agents

Course Duration: 40 hours

About This Course

This course provides a comprehensive overview of AI automation using Microsoft Copilot and extends into the development of Retrieval-Augmented Generation (RAG) bots and intelligent agents. Participants will explore Copilot's capabilities across Microsoft 365, Power BI, and Fabric, and gain hands-on experience building customized AI-driven automation solutions for real-world business applications.

Audience Profile:

Developers, DevOps, IT, Security

At the end of the course, graduates will be able to

- Use Microsoft Copilot effectively across Microsoft 365 applications to automate daily workflows.
- Integrate Copilot with Power BI and Microsoft Fabric for AI-driven analytics
- Design and implement Retrieval-Augmented Generation (RAG) bots for document-based Q&A
- Develop and deploy intelligent agents capable of handling multi-step automated processes
- Apply AI governance, ethical, and performance best practices in Copilot-based automation projects

Course Details

Module 1: Introduction to Microsoft Copilot & AI Automation

- Overview of Copilot (browser, Pro, Microsoft 365)
- Generative AI concepts and business value
- Licensing versions and implications

Module 2: Copilot in Microsoft 365 Productivity Applications

- Copilot in Word, Excel, PowerPoint, Outlook, Teams
- Data analysis, summaries, task automation

Module 3: Copilot in Analytics & BI – Power BI & Microsoft Fabric

- Copilot integration with Power BI and Fabric
- Dataflows Gen2, Notebooks, and Python support

Module 4: Building Custom Copilot Assistants & Automations

- Custom copilots with Copilot Studio
- Prompt engineering and workflow automation
- Ethics, privacy, and governance
- Using external AI tools as agents: Lovable, Claude Code
- Integration with business interfaces: Priority, SBO, Monday.com, Power BI, phone systems, WhatsApp

Module 5: Introduction to RAG (Retrieval-Augmented Generation) & AI Agents

- Document ingestion, embedding, retrieval, and generation
- RAG architecture and enterprise use-cases
- Working with non-text data: video, audio, and call transcription
- Speech-to-text pipelines and indexing spoken content

Module 6: Integrating Copilot with RAG Bots & Agents

- Grounding Copilot with internal data
- Linking retrieval layers with Copilot
- Agent workflow design

Module 7: Advanced Agent Capabilities & Enterprise Considerations

- Multi-step agent workflows
- Logging, monitoring, and security
- Performance and cost optimization
- Solution architecture: Dev / Test / Production environments
- RAG architecture deep dive: indexing, chunking, retrieval strategies
- Permissions model, data governance, and access control
- Interface connectors: Priority, SBO, Monday.com, PBI, telephony, WhatsApp

Module 8: Capstone Project – Putting It All Together

- Review and future trends
- AI automation best practices
- Final project implementation