

GenAI for Networking: Prompts & Traffic AI

2 Days

16 HOURS

6

MODULES

23

TOPICS

1

HANDS-ON ACTIVITIES

PREREQUISITES

- No prior AI experience required

TOOLS AND REQUIREMENTS

Labs

- Hands-on using Open-Source Tools, Microsoft Learn Resources & Cloud-based AI Platforms

LEARNING OBJECTIVES

- Explain AI, machine learning and data science workflows
- Describe supervised, unsupervised and reinforcement learning types
- Apply machine learning concepts to network traffic analysis
- Explain how generative AI and transformer-based LLMs work
- Identify networking use cases such as ticket summarization
- Apply prompt techniques including zero-shot and chain-of-thought
- Evaluate AI tools such as NotebookLM and AWS PartyRock
- Analyse AI applications in network optimization and intrusion detection

6 Modules, 23 Topics

01

Foundations of AI, Machine Learning, and Data Science

TOPICS

- Introduction to Artificial Intelligence and Machine Learning
- Understanding Data Science Workflow
- **Types of Machine Learning:** Supervised, Unsupervised, and Reinforcement
- Applying ML Concepts to Networking (Predictive Maintenance & Traffic Analysis)

02

Introduction to Generative AI

TOPICS

- What is Generative AI and How It Works
- Predictive vs. Generative Models
- Transformer Architecture and LLM Overview (GPT, Claude, Gemini)
- Real-World Applications of GenAI in Networking and IT Operations

03

Industry Trends and Model Use Cases

TOPICS

- What's Happening Around in Generative AI
- Key Industry Models and Their Strengths
- Responsible AI and Ethical Considerations
- **Networking-Specific Use Cases:** Ticket Summarization, Anomaly Detection, Configuration Generation

04

Prompt Engineering Techniques

TOPICS

- Understanding Prompts and Their Role in GenAI
- **Types of Prompts:** Zero-shot, Few-shot, and Chain-of-Thought
- Best Practices for Crafting Prompts

HANDS-ON EXERCISES

- Prompts for Network Log Summaries and Automated Configuration Suggestions

05

Exploring AI Tools

TOPICS

- Introduction to Comet Browser for Experiment Tracking
- Using NotebookLM for Personalized Knowledge Summarization
- Building Agents using AWS PartyRock Playground
- Practical Labs integrating AI tools with Networking Scenarios

06

AI in Networking Applications

TOPICS

- AI for Network Optimization and Traffic Forecasting
- Network Security and Intrusion Detection using AI Models
- Intent-Based Networking and Predictive Maintenance
- **Microsoft Learn Labs:** AI in Azure Networking and Infrastructure Services

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

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