



## Network for AI Training

This training is tailored for professionals seeking to design network infrastructures optimized for AI workloads. It focuses on meeting the unique requirements of AI applications, such as high bandwidth, low latency, and scalability. The course explores advanced topics like 5G and edge computing for AI, cloud-native solutions, and quantum networking. Real-world case studies provide practical insights, enabling participants to create efficient, future-ready networks that power AI innovations.

### Modules:

#### 1. Introduction to AI Networking Requirements

- Challenges of networking for AI workloads: bandwidth, latency, and scalability.
- Telecom network evolution to support AI applications.
- Design principles for AI-driven networks.

#### 2. Architecting Networks for AI Workloads

- High-performance network design for AI applications.
- Building efficient data pipelines for AI training and inference.
- Network resilience for heavy AI workloads.

#### 3. 5G and Edge Computing for AI

- Role of 5G in enabling AI-driven ecosystems.
- Network slicing for AI-specific applications.

- Edge computing for real-time AI inference and processing.

#### **4. Cloud-Native Networking for AI**

- Distributed computing frameworks for scalable AI workloads.
- Leveraging SDN and NFV for AI network integration.
- Hybrid cloud solutions for AI applications.

#### **5. Future Trends: AI in 6G and Quantum Networking**

- Preparing networks for emerging AI technologies.
- Impact of quantum networking on AI systems.
- Opportunities and challenges in 6G networks for AI.T

#### **6. AI-Optimized Data Centers**

- Designing AI-ready data center networks.
- AI-powered traffic and performance management.
- Case studies of AI in large-scale data center operations.

#### **7. Case Studies and Practical Applications**

- Industry success stories: AI in telecom network deployments.
- Best practices for AI and network integration.
- Real-world examples of AI innovation in telecom.