



Arrow ECS Finland Oy - Education Services

TRAINING OFFERING

You can reach us at:

Arrow ECS Finland Oy, Lars Sonckin kaari 16, 02600 Espoo, Finland

Email: education.ecs.fi@arrow.com

Phone: 0870 251 1000

| CODE: | LENGTH: | PRICE: |
|------------|----------|---------|
| AIC_AT-320 | 40 Hours | €449.00 |

Description

Visualize Tomorrow: Neural Networks in Vision

Deep AI Expertise: Covers neural networks, NLP, and computer vision frameworks

Enterprise AI: Learn to design scalable AI systems for real-world impact

Capstone Integration: Build, test, and deploy advanced AI architectures

Industry Preparedness: Equips you for roles in high-demand AI design domains

Included: Instructor-led OR Self-paced course + Official exam + Digital badge

Delivery: Online labs, projects, case studies

Outcome: Industry-recognized credential + hands-on experience

The following tools will be explored in this course:

- AutoGluon
- ChatGPT
- SonarCube
- Vertex AI

What's Included (One-Year Subscription + All Updates):

- High-Quality Videos, E-book (PDF & Audio), and Podcasts
- AI Mentor for Personalized Guidance
- Quizzes, Assessments, and Course Resources
- Online Proctored Exam with One Free Retake
- Comprehensive Exam Study Guide
- Access for Tablet & Phone

Objectives

- Advanced Neural Network Design
- AI Model Evaluation & Performance Metrics
- Generative AI for Architecture
- AI Deployment & Infrastructure
- Machine Learning Optimization Shape

Audience

- **Architecture Professionals:** Enhance your architectural design skills by integrating AI to create scalable, efficient, and intelligent systems for modern solutions.
- **Systems Architects & Engineers:** Learn to leverage AI to design and build sophisticated, scalable infrastructures while automating key processes.
- **IT Infrastructure Managers:** Use AI to optimize architecture planning, streamline infrastructure deployment, and ensure seamless system integration.
- **Business Leaders:** Drive transformation within your organization by adopting AI-driven architectural solutions to enhance scalability, reduce costs.
- **Students & New Graduates:** Gain a competitive edge in the tech industry by mastering AI architectural techniques and tools.

Prerequisites

- A foundational knowledge on neural networks, including their optimization and architecture for applications.
- Ability to evaluate models using various performance metrics to ensure accuracy and reliability.
- Willingness to know about AI infrastructure and deployment processes to implement and maintain AI systems effectively.

Programme

Certification Overview

Course Introduction

Module 1: Fundamentals of Neural Networks

- 1.1 Introduction to Neural Networks
- 1.2 Neural Network Architecture
- 1.3 Hands-on: Implement a Basic Neural Network

Module 2: Neural Network Optimization

- 2.1 Hyperparameter Tuning
- 2.2 Optimization Algorithms
- 2.3 Regularization Techniques
- 2.4 Hands-on: Hyperparameter Tuning and Optimization

Module 3: Neural Network Architectures for NLP

- 3.1 Key NLP Concepts
- 3.2 NLP-Specific Architectures
- 3.3 Hands-on: Implementing an NLP Model

Module 4: Neural Network Architectures for Computer Vision

- 4.1 Key Computer Vision Concepts
- 4.2 Computer Vision-Specific Architectures
- 4.3 Hands-on: Building a Computer Vision Model

Module 5: Model Evaluation and Performance Metrics

- 5.1 Model Evaluation Techniques
- 5.2 Improving Model Performance
- 5.3 Hands-on: Evaluating and Optimizing AI Models

Module 6: AI Infrastructure and Deployment

- 6.1 Infrastructure for AI Development
- 6.2 Deployment Strategies
- 6.3 Hands-on: Deploying an AI Model

Module 7: AI Ethics and Responsible AI Design

- 7.1 Ethical Considerations in AI
- 7.2 Best Practices for Responsible AI Design
- 7.3 Hands-on: Analyzing Ethical Considerations in AI

Module 8: Generative AI Models

- 8.1 Overview of Generative AI Models
- 8.2 Generative AI Applications in Various Domains
- 8.3 Hands-on: Exploring Generative AI Models

Module 9: Research-Based AI Design

- 9.1 AI Research Techniques
- 9.2 Cutting-Edge AI Design
- 9.3 Hands-on: Analyzing AI Research Papers

Module 10: Capstone Project and Course Review

- 10.1 Capstone Project Presentation
- 10.2 Course Review and Future Directions
- 10.3 Hands-on: Capstone Project Development

Optional Module: AI Agents for Architect

- 1. Understanding AI Agents
- 2. Case Studies

Follow on courses

- AI+ Cloud™

Test and Certification

Exam Details

- Duration: 90 minutes
- Passing Score: 70% (35/50)
- Format: 50 multiple-choice/multiple-response questions
- Delivery Method: Online via proctored exam platform (flexible scheduling)

Exam Blueprint

- Fundamentals of Neural Networks – 10%
- Neural Network Optimization – 10%
- Neural Network Architectures for NLP – 10%
- Neural Network Architectures for Computer Vision – 10%
- Model Evaluation and Performance Metrics – 10%
- AI Infrastructure and Deployment – 10%
- AI Ethics and Responsible AI Design – 10%
- Generative AI Models – 10%
- Research-Based AI Design – 10%
- Capstone Project and Course Review – 10%

Session Dates

| Date | Location | Time Zone | Language | Type | Guaranteed | PRICE |
|-------------|----------|-----------|----------|---------------------|------------|---------|
| 01 Jan 0001 | | | English | Self Paced Training | | €449.00 |

Additional Information

[This training is also available as onsite training. Please contact us to find out more.](#)