

## **Enterprise Computing Solutions - Education Services**

# **TRAINING OFFERING**

You can reach us at:

Arrow Enterprise Computing Solutions Ltd, Part 1st Floor, Suite 1D/1, Central House, Otley Road, Harrogate, HG3 1UG

Email: education.ecs.baltic@arrow.com

Phone: 0870 251 1000



CODE: LENGTH: PRICE:

AIC AT-320 40 Hours €249.00

#### **Description**

Visualize Tomorrow: Neural Networks in Vision

Deep Al 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 Al 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
- Al 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
- Al Model Evaluation & Performance Metrics
- Generative AI for Architecture
- Al 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 Al-driven architectural solutions to enhance scalability, reduce costs.
- Students & New Graduates: Gain a competitive edge in the tech industry by mastering Al 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 Al infrastructure and deployment processes to implement and maintain Al 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 Al Models

#### Module 6: Al Infrastructure and Deployment

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

#### Module 7: Al Ethics and Responsible Al Design

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

#### **Module 8: Generative AI Models**

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

#### Module 9: Research-Based Al Design

- 9.1 Al Research Techniques
- 9.2 Cutting-Edge Al Design
- 9.3 Hands-on: Analyzing Al 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: Al Agents for Architect**

- 1. Understanding Al Agents
- 2. Case Studies

#### Follow on courses

Al+ 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%
- Al Infrastructure and Deployment 10%
- Al Ethics and Responsible Al Design 10%
- Generative Al Models 10%
- Research-Based Al Design 10%
- Capstone Project and Course Review 10%

#### **Session Dates**

Date	Location	Time Zone	Language	Туре	Guaranteed	PRICE
01 Jan 0001			English	Self Paced Training		€249.00

## **Additional Information**

This training is also available as onsite training. Please contact us to find out more.