

# AI-900: MICROSOFT AZURE AI FUNDAMENTALS

**DETAILED TRAINING SYLLABUS (CONCEPT + HANDS-ON + JOB ORIENTED)**

## PROGRAM OBJECTIVE

**This program is designed to:**

- Build strong foundational understanding of AI concepts
- Provide hands-on exposure to Azure AI services
- Enable learners to identify AI use cases in business
- Prepare candidates for AI-900 certification

**Suitable for:** Freshers, Business Analysts, Non-programmers entering AI, Cloud beginners



# DURATION

20-24 Hours

# Module 1: Introduction to Artificial Intelligence (3-4 Hours)

## Core Topics

- Definition and evolution of AI
- Types of AI:
  - Narrow AI vs General AI
  - AI vs Machine Learning vs Deep Learning

## AI Workloads Explained

Definition and evolution of AI, Machine Learning, Computer Vision, Natural Language Processing (NLP), Conversational AI, Generative AI

## Real-World Use Cases

Banking: Fraud detection, Retail: Recommendation engines, Healthcare: Diagnosis systems, IT: Chatbots

## Key Concepts

Data-driven decision making, Pattern recognition, Automation using AI

## Assignment

Identify 5 AI use cases in your current domain

## Scenario

A company wants to reduce manual support effort using AI chatbot



## **Module 2: Introduction to Azure AI Services (3-4 Hours)**

### **Topics**

Overview of Microsoft Azure ecosystem, What is Microsoft Azure, Azure AI services architecture

### **Azure AI Services Overview**

Azure AI Vision, Azure AI Language, Azure AI Speech, Azure OpenAI

### **Concepts**

Cloud-based AI vs on-premise AI, API-based AI consumption

### **Hands-On**

Azure Portal navigation, Creating AI resources

### **Assignment**

Create Azure account and explore AI services

### **Scenario**

Company wants to use prebuilt AI APIs instead of building models

## **Module 3: Machine Learning Fundamentals (4-5 Hours)**

### **Topics**

- What is Machine Learning?
- Types:
  - Supervised Learning (Regression, Classification)
  - Unsupervised Learning (Clustering)
  - Reinforcement Learning

### **Core Concepts**

Features & labels, Training vs testing data, Overfitting vs underfitting, Model evaluation metrics

### **Azure ML Concepts**

Azure Machine Learning workspace, Low-code ML tools bots

### **Assignment**

Identify ML use case (sales prediction / fraud detection)

### **Scenario**

Predict customer churn using historical data

## **Module 4: Computer Vision (3-4 Hours)**

### **Topics**

Image classification, Object detection, Face recognition, Optical Character Recognition (OCR)

### **Tools**

Azure AI Vision



## Use Cases

Invoice scanning, Security surveillance, Medical imaging

## Hands-On

Upload images and analyze results

## Scenario

Automate document processing using OCR

## Module 5: Natural Language Processing (NLP) (3-4 Hours)

### Topics

Text analytics, Sentiment analysis, Named entity recognition, language detection (OCR)

### Concepts

Tokenisation, Language models

### Tools

Azure AI Language

### Assignment

Perform sentiment analysis on reviews

### Scenario

Analyze customer feedback from social media



## Module 6: Speech AI (2-3 Hours)

### Topics

Speech-to-text, Text-to-speech, Speech translation

### Tools

Azure AI Speech

### Use Cases

Voice assistants, Call center automation

### Assignment

Convert voice input into text

### Scenario

Build voice-based support system

## Module 7: Generative AI & Azure OpenAI (2-3 Hours)

### Topics

What is Generative AI, Large Language Models (LLMs), Prompt engineering basic

### Tools

Azure OpenAI

### Concepts

Prompt design, Responsible usage

### Assignment

Create prompts for chatbot responses

### Scenario

Build AI assistant for FAQs

## Module 8: Responsible AI (2-3 Hours)

### Topics

Fairness Reliability & safety, Privacy & security, Transparency & explainability

### Concepts

Bias in AI Ethical AI practices

### Assignment

Identify risks in AI system

### Scenario

AI hiring system showing bias

## Project 1: AI Chatbot

- Use Azure AI / OpenAI
- Build simple chatbot
- Handle business queries

## Project 2: Image Processing System

- Upload images
- Detect objects/text
- Generate structured output

## Project 3: Customer Feedback Analyzer

- Analyze reviews
- Sentiment classification
- Business insights



# KEY HIGHLIGHTS

- Strong Foundation in AI Concepts
- Hands-On Azure AI Services Training
- Real-World AI Use Case Exploration
- Practical Labs & Guided Exercises
- Introduction to Generative AI & Machine Learning
- Industry-Relevant AI Fundamentals
- AI-900 Certification Preparation

# WHO CAN JOIN?

- Freshers • Any Graduates • Business Analysts • Non-Programmers Exploring AI
- Cloud Beginners • Students • Working Professionals Looking to Transition into AI

# FINAL OUTCOME

After completion, learners will:

- ✓ Understand AI concepts clearly
- ✓ Use Azure AI services confidently
- ✓ Identify AI opportunities in business
- ✓ Be ready for AI-900 certification

# JOB-ORIENTED SCENARIOS

Business Scenarios

- Automating customer support
- Predicting sales trends

Technical Scenarios

- Poor model accuracy
- Data quality issues

Ethical Scenarios

- AI bias
- Privacy violations

# TARGET JOB ROLES

- AI Associate
- Azure AI Fundamentals Professional
- AI Business Analyst
- AI Solutions Associate
- AI Operations Support Executive
- Cloud AI Associate
- Data & AI Analyst (Entry Level)
- AI Project Coordinator

# CONTACT US



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