

# Microsoft AI School Curriculum Summary

## Program Overview

The Microsoft AI School aims to equip participants with the necessary skills in Python programming, machine learning, and cloud computing, focusing on practical applications in artificial intelligence. The program runs from September 2024 to February 2025, with classes held Monday to Friday from 9 AM to 6 PM, totaling 956 hours of instruction.

## Curriculum

### 1. Core Modules

- **Python Basics (56 hours):** Core Python syntax and data analysis, visualization.
- **Statistical Data Utilization (60 hours):** Statistical testing methods and predictive modeling.
- **AI Fundamentals (48 hours):** Introduction to AI theories and applications.
- **HTML & CSS (16 hours):** Fundamentals of web development and styling.
- **JavaScript (16 hours):** Basic syntax and DOM manipulation.
- **Cloud Computing (40 hours):** Cloud concepts, virtual machine implementation.
- **CRUD Application Development (24 hours):** Building a CRUD application.
- **Git & Developer Mindset (8 hours):** Introduction to Git, GitHub, and Codespace.

### 2. Advanced Modules

- **Neural Networks Basics (24 hours):** Fundamentals of perceptrons and neural networks.
- **Neural Networks Advanced (24 hours):** Implementation of Back-Propagation, batch normalization, CNNs, and deep learning.
- **Azure AI Vision (40 hours):** Image analysis, OCR, facial recognition, app integration.
- **Azure OpenAI (40 hours):** REST API/Python integration, and data-driven customization.

### 3. Practical Projects

- **Machine Learning Projects (53 hours):** Team project based on Machine learning.
- **Open AI Projects (68 hours):** Hands-on experience with Azure AI Service.
- **AI Project Development (191 hours):** Comprehensive project covering Data collection, preprocessing, training, and postprocessing implementation.

### 4. Career Mentoring, Workshops, and Technical Training (248 hours)

- A comprehensive program covering developer growth mindset, Power Platform, Azure-based object detection, AI basics, career mentoring, and Microsoft meetings.