Azure AI Course Syllabus

Section 1: Introduction to Azure AI

- Overview of AI and machine learning
- Introduction to Microsoft Azure AI services
- Setting up Azure environment and tools

Section 2: Machine Learning with Azure

- Basics of machine learning
- Azure Machine Learning Studio
- Creating and managing machine learning models

Section 3: Natural Language Processing (NLP)

- Fundamentals of NLP
- Using Azure Text Analytics
- Implementing conversational AI with Azure Bot Services

Section 4: Computer Vision
- Image analysis with Azure Computer Vision
- Building and deploying image recognition models
- Optical Character Recognition (OCR) with Azure

Section 5: Speech Services

- Introduction to Azure Speech Services
- Speech-to-text and text-to-speech conversion
- Real-time speech translation

Section 6: Azure Cognitive Services

- Overview of Azure Cognitive Services
- Key APIs: Face API, Text Analytics, and Translator
- Hands-on with integrating cognitive service

Section 7: Data Preparation for AI

- Data preprocessing techniques
- Data storage and retrieval in Azure Data Lake
- Connecting AI models with Azure databases

Section 8: AI Solution Deployment

- Deploying AI models using Azure Kubernetes Service (AKS)
- Integration with Azure DevOps
- Monitoring and optimizing deployed AI solutions

Section 9: Ethics and Responsible AI

- AI ethics and best practices
- Implementing Responsible AI principles
- Ensuring fairness, transparency, and accountability

Section 10: Capstone Project

- Real-world Azure AI project
- End-to-end solution development
- Project review & certification