AI Practitioner

Training Course	AI Practitioner
Course Language	English
Course Duration	Total Number of hours - 40 Hours
Course Objectives	• Understand the core concepts, history, and evolution of Artificial Intelligence (AI). • Explore machine learning (ML), deep learning, and natural language processing (NLP). • Apply AI models for real-world business and technical problems. • Work with AI tools, frameworks, and platforms such as TensorFlow, PyTorch, and OpenAI models. • Evaluate ethical considerations and challenges in AI deployment. • Develop AI strategies for business and industry applications.
Learning Outcomes	• Explain AI concepts, methodologies, and real-world applications. • Develop and implement AI models using machine learning frameworks. • Analyze AI-driven business solutions and optimize processes. • Identify and mitigate ethical risks in AI applications. • Work with AI-powered tools for NLP, computer vision, and automation.

Course Content

Module 1: Introduction to AI
- Definition and history of AI
- Types of AI: Narrow AI, General AI, and Super AI
- Key AI technologies: Machine Learning, Deep Learning, NLP, Computer Vision
- Applications of AI across industries

Module 2: Machine Learning Fundamentals
- Supervised, Unsupervised, and Reinforcement Learning
- Common algorithms: Linear Regression, Decision Trees, Neural Networks
- Model evaluation and performance metrics

Module 3: Deep Learning & Neural Networks
- Introduction to Artificial Neural Networks (ANN)
- Convolutional Neural Networks (CNN) for image processing
- Recurrent Neural Networks (RNN) and transformers for NLP

Module 4: Natural Language Processing (NLP)
- Fundamentals of NLP and text processing
- Chatbots and AI-driven conversational agents
- Sentiment analysis and language models (GPT, BERT, etc.)

Module 5: AI in Computer Vision
- Image classification, object detection, and facial recognition
- AI-powered image and video analysis

Module 6: AI Tools and Implementation
- Introduction to TensorFlow and PyTorch
- Hands-on AI model development in Python
- AI deployment using cloud platforms

Module 7: Ethics & Challenges in AI
- AI bias and fairness
- Ethical concerns in AI decision-making
- Regulatory compliance and responsible AI

Module 8: AI for Business & Industry
- AI strategies for organizations
- AI-driven automation and process optimization
- Future trends and AI innovations

Target Audience	• **Data scientists and analysts looking to advance their AI skills.** • **Software engineers and developers interested in AI implementation.** • **Business leaders and managers exploring AI-driven solutions.** • **Students and researchers in AI, ML, and data science.** • **Anyone curious about AI and its practical applications.**
Course Material /Technology used/ Details Relevant to the course.	• PowerPoint presentation prepared by the trainer . • Digital manual to be given to trainees