

SkillNexa AI Academy

AI Practitioner

Machine Learning & Applied Artificial Intelligence

Program Level: Practitioner

Total Duration: 96 Hours

Delivery: Cohort-Based + Instructor-Led + Hands-On Labs

Pathway: Foundation → **Practitioner**

PROGRAM GOAL

AI Practitioner moves students from **understanding AI to building and evaluating AI systems**.

Students are introduced to the machine learning lifecycle:

Data → Preparation → Features → Model → Training → Evaluation → Improvement → Application

The program emphasizes hands-on experimentation using age-appropriate datasets, Python-based tools, and controlled AI environments.

PROGRAM STRUCTURE

Module	Topic	Hours
Module 1	Machine Learning Fundamentals	24
Module 2	Data Science & Analytics	20
Module 3	Computer Vision	20
Module 4	AI Model Development	16
Module 5	Applied AI Project	16

Total

96 Hours

MODULE 1 — MACHINE LEARNING FUNDAMENTALS

1.1 Introduction to Machine Learning

LAB 1.1

1.2 Machine Learning Data

LAB 1.2

1.3 Supervised Learning

LAB 1.3.1

LAB 1.3.2

1.4 Unsupervised Learning

LAB 1.4 — Create Data Groups

1.5 Machine Learning Models

LAB 1.5

1.6 Model Evaluation

LAB 1.6

1.7 Machine Learning Project

MODULE 1 Assessment

MODULE 2 — DATA SCIENCE & ANALYTICS

2.1 Introduction to Data Science

2.2 Data Cleaning

LAB 2.2

2.3 Data Preparation

LAB 2.3 — Prepare Machine Learning Data

2.4 Statistical Concepts

LAB 2.4

2.5 Data Visualization

LAB 2.5

2.6 Feature Selection

LAB 2.6

2.7 Data Science Project

MODULE 2 ASSESSMENT

MODULE 3 — COMPUTER VISION

3.1 Introduction to Computer Vision

LAB 3.1

3.2 Image Processing

LAB 3.2

3.3 Image Classification

LAB 3.3

3.4 Object Detection

LAB 3.4

3.5 Facial Recognition Concepts

LAB 3.5

3.6 Computer Vision Project

MODULE 3 ASSESSMENT

MODULE 4 — AI MODEL DEVELOPMENT

4.1 Machine Learning Workflow

LAB 4.1

4.2 Model Training

LAB 4.2

4.3 Improving Model Performance

LAB 4.3

4.4 Model Evaluation & Responsible AI

LAB 4.4

4.5 AI Deployment Concepts

LAB 4.5

MODULE 4 ASSESSMENT

MODULE 5 — APPLIED AI PROJECT

5.1 Project Selection

5.2 Project Planning

LAB 5.2 — AI Project Proposal

5.3 Project Development

LAB 5.3 — Build the AI Prototype

5.4 Testing & Evaluation

LAB 5.4 — AI Testing Report

5.5 Project Documentation

5.6 Final Applied AI Presentation

MODULE 5 ASSESSMENT

FINAL ASSESSMENT