

# AI/ML WITH PYTHON

## ABOUT US

*Xiartz aims to improve education around the world by creating personalized, interactive learning tools. They combine technology with a focus on students' needs to make learning easier and more engaging. By supporting teachers, students, and parents, Xiartz hopes to inspire a love of learning and prepare future generations to think, create, and lead.*

*Xiartz helps people build careers through practical learning, expert guidance, and future-ready skills.*

## OUR VISION, MISSION, GOALS



### Vision

We aim to improve learning and help people achieve their potential, no matter where they live or their economic background.



### Mission

Our mission is to use technology to make education accessible, spark curiosity, and help every learner reach their true potential.



### Goals

We aim to give students industry skills through expert teaching and practical learning experiences that prepare them for real jobs.

## HEADQUARTER

*Malappuram Dt, Kerala*

*Learn important skills through our certified course and grow confidently*

# Program Highlights

Live Classes

Expert Trainers

Real time projects

Practice tests

Flexible learning program

Doubt Sessions

Weekly Assignments

Placement Training

Certificates

## Industry Trend

The global AI/ML workforce is projected to surpass **25 million by 2030, with Python as the core language across tools and frameworks. GenAI and LLMs are rapidly reshaping job roles, creating demand for Prompt Engineers, LLM Developers, and MLOps professionals. Sectors like finance, healthcare, retail, EdTech, and e-commerce are investing heavily in AI-driven solutions.**



**120,000+ active AI/ML with Python roles globally on LinkedIn at any given time** Professionals with “AI/ML with Python” or similar in profile:

- ✓ **12–15 million globally**
- ✓ **2–3 million in India alone**

### Job Market Activity

- ✓ **Over 1.8 million AI/ML with Python jobs posted globally across platforms like LinkedIn, Indeed, and company portals**
- ✓ **India: ~200k–250k active AI/ML-related roles, spanning startups to MNCs**

# TABLE OF CONTENT

<b>INTRODUCTION TO AI, ML &amp; PYTHON</b>	<b>01</b>
<hr/>	
<b>DATA PREPROCESSING &amp; FEATURE ENGINEERING</b>	<b>02</b>
<hr/>	
<b>SUPERVISED LEARNING USING PYTHON</b>	<b>03</b>
<hr/>	
<b>REGRESSION MODELS</b>	<b>04</b>
<hr/>	
<b>CLASSIFICATION MODELS</b>	<b>05</b>
<hr/>	
<b>DEEP LEARNING WITH TENSORFLOW &amp; KERAS</b>	<b>06</b>
<hr/>	
<b>BASICS OF NATURAL LANGUAGE PROCESSING (NLP) USING PYTHON</b>	<b>07</b>
<hr/>	
<b>MODEL DEPLOYMENT USING PYTHON</b>	<b>08</b>
<hr/>	
<b>REAL-WORLD AI &amp; ML PROJECTS USING PYTHON</b>	<b>09</b>
<hr/>	

# AI/ML WITH PYTHON

## 01 INTRODUCTION TO AI, ML & PYTHON

- ✓ What is AI & Machine Learning?
- ✓ Real-World Applications of AI & ML
- ✓ Types of Machine Learning (Supervised, Unsupervised, Reinforcement)
- ✓ Introduction to Python for AI & ML
- ✓ Setting Up Jupyter Notebook, Google Colab & VS Code
- ✓ Python Essentials: NumPy, Pandas, Matplotlib & Seaborn

## 02 DATA PREPROCESSING & FEATURE ENGINEERING

- ✓ Handling Missing Values & Outliers
- ✓ Data Cleaning & Transformation (Scaling, Encoding, Normalization)
- ✓ Feature Selection & Extraction Techniques
- ✓ Splitting Data into Training & Testing Sets
- ✓ Handling Imbalanced Datasets
- ✓ Hands-on: Cleaning & Preparing Real-World Datasets

## 03 SUPERVISED LEARNING USING PYTHON REGRESSION MODELS:

- ✓ Linear & Multiple Linear Regression
- ✓ Polynomial Regression
- ✓ Model Evaluation (MSE, RMSE,  $R^2$  Score)

## 04 CLASSIFICATION MODELS

- ✓ Logistic Regression
- ✓ Decision Trees & Random Forest
- ✓ Support Vector Machines (SVM)
- ✓ k-Nearest Neighbors (KNN)
- ✓ Performance Metrics (Confusion Matrix, Precision, Recall, F1-score)

# AI/ML WITH PYTHON

## 05 DEEP LEARNING WITH TENSORFLOW & KERAS

- ✓ Introduction to Neural Networks
- ✓ Understanding Perceptron & Multi-Layer Perceptron (MLP)
- ✓ Activation Functions & Loss Functions
- ✓ Deep Learning with TensorFlow & Keras
- ✓ Convolutional Neural Networks (CNN) for Image Classification
- ✓ Python Essentials: NumPy, Pandas, Matplotlib & Seaborn

## 06 BASICS OF NATURAL LANGUAGE PROCESSING (NLP) USING PYTHON

- ✓ Text Preprocessing (Tokenization, Stopword Removal, Lemmatization)
- ✓ Bag of Words (BoW) & TF-IDF for Text Representation
- ✓ Sentiment Analysis using Python
- ✓ Classifying Positive & Negative Reviews

## 07 MODEL DEPLOYMENT USING PYTHON

- ✓ Model Serialization with Pickle & Joblib
- ✓ Deploying ML Models Using Flask & Streamlit
- ✓ AI Ethics & Bias in Machine Learning
- ✓ Industry Applications of AI in Healthcare, Finance & E-commerce

## 08 REAL-WORLD AI & ML PROJECTS USING PYTHON

- ✓ Performing End-to-End AI/ML Projects on Real-World Datasets
- ✓ AI for Business Intelligence & Automation
- ✓ Building ML-Powered Data Analysis & Prediction Systems
- ✓ Developing & Deploying a Complete AI/ML Project

# PROGRAM DETAILS

## MENTOR LED BASIC

₹ 3500

- 8 hrs of Live class learning
- Mock Tests / Projects
- Industry Aliened projects
- Training & Internship Certificate
- Letter of Recommendation

## MENTOR LED ENHANCE

₹ 5000

- 16+hrs of Live mentor support
- Doubt Clearance Sessions
- Dedicated Mentor
- Mock Tests / Projects
- Training & Internship Certificate & LOR

## MENTOR LED ADVANCED

₹ 8000

- 30+hrs of Live mentor & Training & Internship Certificate & LOR
- Doubt Clearance Sessions & Placement Assistance
- Resume Building & Placement Guidance
- Access to Hiring Platforms  
Interview Preparations
- Special access to placement communities

# Learning together. Growing forever.

---

We can shape a better future.

We believe that by working together,



"We are available 24/7. Feel free to contact us anytime — we're here to clear all your doubts."

To more info visit  
[www.xiartz.com](http://www.xiartz.com)