



**QUILLANCE
INFOTECH PVT LTD.**

Artificial Intelligence & Machine Learning

The Quillance Artificial Intelligence & Machine Learning Program is a complete beginner-to-advanced training program designed to help learners master AI concepts, machine learning algorithms, deep learning, neural networks, automation, and intelligent systems used by modern technology companies and AI-driven industries worldwide.



Program Overview

What You Will Learn

- Understand AI and machine learning fundamentals
- Learn Python programming and AI development workflows
- Build machine learning and predictive models
- Understand deep learning, NLP, and neural networks
- Work with real-world AI datasets and intelligent systems
- Develop automation and data-driven AI applications

Career Opportunities

After completing this program, learners can apply for roles such as:

- AI Engineer
- Machine Learning Engineer
- Data Scientist
- AI Research Associate
- NLP Engineer
- AI & ML Intern

Live Projects You'll Build

- **Project 1 – AI-Based Recommendation System**

Build recommendation systems similar to e-commerce and streaming platforms.

- **Project 2 – Predictive Analytics Model**

Develop machine learning models to predict business and customer trends.

- **Project 3 – AI Chatbot & NLP Assistant**

Create AI-powered chatbots using Natural Language Processing concepts.

- **Project 4 – Image Classification System**

Build computer vision applications for image recognition and classification.

- **Project 5 – Deep Learning AI Application**

Develop neural network-based intelligent applications using deep learning frameworks.

- **Project 6 – End-to-End AI & ML Capstone**

Work on complete AI pipelines including data preprocessing, model training, deployment, and optimization.

MODULE 1

Artificial Intelligence Fundamentals

TOPICS COVERED:

- Introduction to Artificial Intelligence
- Types of AI & Intelligent Systems
- AI Applications & Industry Use Cases
- Data Science & AI Fundamentals
- Python Basics for AI Development
- AI Ethics & Responsible AI Concepts

SKILLS GAINED:

- AI Fundamentals
- Python Basics
- Intelligent System Understanding
- Analytical Thinking Skills

PRACTICAL LEARNING:

- Understand AI workflows and applications
- Work with basic AI datasets
- Learn Python fundamentals for AI
- Explore intelligent automation concepts

MODULE 2

Python, Data Analysis & Machine Learning Basics

TOPICS COVERED:

- Python Programming Fundamentals
- NumPy & Pandas for Data Handling
- Data Cleaning & Transformation
- Exploratory Data Analysis (EDA)
- Introduction to Machine Learning
- Supervised & Unsupervised Learning Basics

SKILLS GAINED:

- Python Programming Skills
- Data Analysis Workflow Understanding
- Machine Learning Basics
- Data Processing Techniques

PRACTICAL LEARNING:

- Analyze datasets using Python
- Clean and process raw data
- Build basic machine learning models
- Understand data-driven AI workflows

MODULE 3

Machine Learning Algorithms & Predictive Analytics

TOPICS COVERED:

- Regression Algorithms
- Classification Algorithms
- Clustering & Unsupervised Learning
- Model Training & Evaluation
- Feature Engineering Basics
- Predictive Analytics & Forecasting

SKILLS GAINED:

- Machine Learning Knowledge
- Predictive Modeling Skills
- AI Workflow Understanding
- Data-Driven Decision Making

PRACTICAL LEARNING:

- Train machine learning models
- Predict trends and outcomes
- Evaluate model accuracy and performance
- Work with predictive AI systems

Module 4

Deep Learning & Neural Networks

TOPICS COVERED:

- Deep Learning Fundamentals
- Artificial Neural Networks (ANN)
- Convolutional Neural Networks (CNN)
- Recurrent Neural Networks (RNN)
- TensorFlow & Keras Basics
- AI Model Optimization Techniques

PRACTICAL LEARNING:

- Build deep learning models
- Train neural network systems
- Work on image and pattern recognition tasks
- Optimize AI model performance

PRACTICAL LEARNING:

- Deep Learning Knowledge
- Neural Network Understanding
- AI Model Training Skills
- Advanced AI Workflow Expertise

NLP, Computer Vision & Advanced AI Applications

TOPICS COVERED:

- Natural Language Processing (NLP) Fundamentals
- Text Processing & Sentiment Analysis
- Chatbots & Conversational AI
- Computer Vision & Image Recognition
- AI Automation & Intelligent Systems
- AI Deployment & Real-World Applications

PRACTICAL LEARNING:

- Build chatbot and NLP applications
- Work on image classification systems
- Explore AI automation workflows
- Understand deployment and optimization concepts

ADVANCED CONCEPTS INCLUDED:

- NLP & Language Models
- AI-Powered Automation
- Image Processing & Recognition
- Intelligent Recommendation Systems
- AI Application Deployment
- Real-World AI Use Cases

SKILLS GAINED:

- NLP & Computer Vision Skills
- AI Application Development
- Intelligent Automation Knowledge
- AI Deployment Understanding

Module 6

Live AI Project & Team Collaboration

TOPICS COVERED:

- AI Project Planning & Workflow
- Data Collection & Preprocessing
- Machine Learning Project Implementation
- AI Model Evaluation & Optimization
- Team Collaboration & Reporting
- Final AI Project Presentation

SKILLS GAINED:

- Real-World AI Experience
- Team Collaboration Skills
- AI Project Presentation Skills
- End-to-End AI Workflow Understanding

PRACTICAL LEARNING:

- Work on AI case studies and datasets
- Build machine learning workflows
- Present AI insights and applications professionally
- Collaborate in AI project teams

Module 7

Placement & Career Preparation

TOPICS COVERED:

- Resume Building & ATS Optimization
- LinkedIn & Professional Branding
- AI & Machine Learning Interview Preparation
- Python, ML & AI Practice Sessions
- Mock Interviews & HR Preparation
- Career Guidance & Professional Development

SKILLS GAINED:

Students will be prepared for internships, AI engineering roles, machine learning opportunities, and intelligent automation careers

CAREER SUPPORT INCLUDES:

- Resume & LinkedIn Reviews
- Mock Technical Interviews
- Internship & Placement Assistance
- GitHub & Portfolio Guidance
- Career Mentorship Sessions
- Professional Communication Training



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Thank You!!



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