

Knowledge & Innovation In Technology and Education

# ARTIFICIAL INTELLIGENCE

NURTUREUPGRADEIGNITE

FEATURES OF PROGRAM

**STUDY ONLINE** 

According to your availability

**BEGINNER FRIENDLY** 

No basic knowledge required

**PROJECTS** 

**Mini** Major projects



### CERTIFICATIONS **Training completion certificate**

#### **DOUBT CLEARING SESSIONS**

**Get Your Doubts Solved Fast** 

#### PLACEMENT GUIDANCE

**Empowering Your Career** 

### **OUR MOTIVE**

#### NURTURE

**Guiding growth, inspiring futures** 

#### UPGRADE

**Transfor Today upgrade for tomorrow** 

#### IGNITE

**Ignite Ideas, Transform possibilites** 

### **ABOUT US**

KI-TECH is an online education platform dedicated to providing students with exceptional learning opportunities and growth. Our mission is to address student's needs and prepare them for success in their fields. With a wide range of programs and courses, we focus on delivering excellence through top-quality study materials and expert instructors, helping students achieve remarkable growth.

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- AI is a rapidly growing field with increasing demand for skilled professionals, offering job security and career advancement opportunities.
- Learning AI develops your ability to analyze complex problems and create innovative solutions using advanced technologies.
- AI knowledge allows you to contribute to cutting-edge projects and technologies, shaping the future of various industries.
- AI skills are applicable across diverse sectors such as healthcare, finance, and technology broadening your professional horizons.

#### **TRAINING OUTCOMES**

- You will learn what AI is and how it works, including basicconcepts and technologies.
- You will gain practical experience with programming and tools used in AI to build and test models.
- You will develop skills to tackle real-world problems using AI techniques, such as predicting outcomes or analyzing data.
- You will understand more complex AI topics, like deep learning and natural language processing, and how these can be applied in various fields.
- You will become aware of the ethical considerations and societal impacts of using AI technologies.



### TRAINING PATH WAY

- Introduction to AI and ML
- Mathematics for Al
- Programming for Al
- Data Preprocessing and Exploration
- Supervised Learning
- Unsupervised Learning

- Neural Networks and Deep Learning
- Advanced Deep Learning Techniques
- Model Evaluation and Validation
- AI in Natural Language Processing
- Ethics and Fairness in Al
- Real-World Applications and Project
  - Work

## Module-I

- Overview of AI and ML
- Historical context and evolution
- Key concepts and terminology





- Linear algebra: vectors, matrices, and operations
- Calculus: derivatives and gradients
- Probability statistics: and distributions, Bayes' theorem

### Module-II

# Module-III

- Introduction to Python for AI
- Libraries and tools: NumPy, pandas, Matplotlib
- Writing and running basic AI scripts





- Data cleaning and normalization • Feature extraction and selection • Exploratory Data Analysis (EDA) techniques

# Module-IV

# Module-V

- Introduction to supervised learning
- Regression algorithms: Linear Regression, **Polynomial Regression**
- Classification algorithms: Logistic Regression, K-Nearest Neighbors, Support Vector Machines





- - Clustering

# **Module-VI**

• Introduction to unsupervised learning • Clustering algorithms: K-Means, Hierarchical

• Dimensionality reduction: Principal Component Analysis (PCA)

# Module-VII

- Basics of neural networks: neurons, layers, activation functions
- Introduction to deep learning frameworks: TensorFlow, Keras, PyTorch
- Building and training simple neural networks





- processing
- sequential data

# Module-VIII

• Convolutional Neural Networks (CNNs) for image

• Recurrent Neural Networks (RNNs) and Long Short-Term Memory (LSTM) networks for

• Transfer learning and pre-trained models

# Module-IX

- Metrics: Accuracy, Precision, Recall, F1 Score, ROC Curve
- Cross-validation techniques
- Hyperparameter tuning and optimization





# Module-X

• Basics of NLP and text processing • Techniques: Tokenization, Named Entity **Recognition**, Sentiment Analysis • Building models for language tasks using libraries like NLTK and SpaCy

# Module-XI

- Ethical considerations in AI development
- Bias and fairness in machine learning models
- Regulatory and compliance aspects







- data collection to deployment
- Case studies and industry applications • Building a complete AI project from • Presenting findings and solutions

### **Module-XII**

#### Tools,Languages& softwares used



# Sample Projects

- Simple Chatbot
- Tic-Tac-Toe Game Al
- Simple Customer Review Analysis





#### Simple chatbot

### CERTIFICATIONS