

## Artificial Intelligence Training + Certification



### Learning Collaborations



## Intro to the Artificial Intelligence Program

Artificial intelligence (AI) refers to the simulation of human intelligence in machines that are programmed to think like humans and mimic their actions.

It is the simulation of natural intelligence in machines that are programmed to learn and mimic the actions of humans. These machines are able to learn with experience and perform human-like tasks. As technologies such as AI continue to grow, they will have a great impact on our quality of life.

Artificial intelligence (AI) is one of the top tech fields to be in right now!

Financial institutions, legal institutions, media companies, and insurance companies are all figuring out ways to use artificial intelligence (ai) to their advantage. From fraud detection to writing news stories with natural language processing(NLP) and reviewing law briefs, AI's reach is extensive.

This course solves a key problem which is making AI available to anyone with no coding background or computer science degree. The purpose of this course is to provide you with knowledge of key aspects of modern AI without any intimidating mathematics and in a practical, easy, and fun way. The course provides students with practical hands-on experience using real-world datasets.

## About the Artificial Intelligence Certification

This course is designed for clearing the TechVidya Artificial Intelligence Certification. The entire course content is in line with the certification program and helps you clear the certification exam with ease and get the best jobs in top MNCs.

As part of this training, you will be working on real-time projects and assignments that have immense implications in the real-world industry scenarios.

At the end of this program, there will be a assessment that perfectly reflects the type of questions asked in the certification exam and helps you score better marks.

TechVidya Course Completion Certificate will be awarded upon the completion of the project work and upon scoring at least 60% marks in the final assessment.

## Prerequisites of the Artificial Intelligence Program

- This course assumes no previous experience, and takes you from the absolute beginner concepts and then goes into more detail. Basic programming skill & scripting experience in any language is required.

## Modules covered under Artificial Intelligence Program

### Module 1 : Introduction to Artificial Intelligence

- Basic Concept of Artificial Intelligence (AI)
- The Necessity of Learning AI
- What is Intelligence?
- What is Intelligence Composed Of?
- Learning – I
- What's Involved in AI
- Application of AI
- Cognitive Modeling: Simulating Human Thinking Procedure
- Agent & Environment

### Module 2 : AI with Python Getting Started

- Why Python for AI
- Features of Python
- Installing Python
- Setting up PATH
- Running Python
- Script from the Command-line
- Integrated Development Environment

### Module 3 : AI with Python – Machine Learning

- Types of Machine Learning (ML)
- Most Common Machine Learning Algorithms

### Module 4 : AI with Python – Data Preparation

- Preprocessing the Data
- Techniques for Data Preprocessing
- Labeling the Data

## Modules covered under Artificial Intelligence Program

### **Module 5 :** AI with Python – Supervised Learning: Classification

- Steps for Building a Classifier in Python Building Classifier in Python
- Logistic Regression
- Decision Tree Classifier
- Random Forest Classifier
- Performance of a classifier
- Class Imbalance Problem
- Ensemble Techniques

### **Module 6 :** AI with Python – Supervised Learning: Regression

- Building Regressors in Python

### **Module 7 :** AI with Python – Logic Programming

- How to Solve Problems with Logic Programming Installing Useful Packages
- Examples of Logic Programming
- Checking for Prime Numbers
- Solving Puzzles

### **Module 8 :** AI with Python – Unsupervised Learning: Clustering

- What is Clustering?
- Algorithms for Clustering the Data
- Measuring the Clustering Performance
- Calculating Silhouette Score
- Finding Nearest Neighbors
- K-Nearest Neighbors Classifier

## Modules covered under Artificial Intelligence Program

### **Module 9 :** AI with Python – Natural Language Processing

- Components of NLP
- Difficulties in NLU
- NLP Terminology
- Steps in NLP

### **Module 10 :** AI with Python – NLTK package

- Importing NLTK
- Downloading NLTK's Data
- Installing Other Necessary Packages
- Concept of Tokenization, Stemming, and Lemmatization
- Chunking: Dividing Data into Chunks
- Types of chunking
- Bag of Word (BoW) Model
- Concept of the Statistics
- Building a Bag of Words Model in NLTK
- Solving Problems
- Topic Modeling: Identifying Patterns in Text Data
- Algorithms for Topic Modeling

### **Module 11 :** AI with Python – Analyzing Time Series Data

- Introduction
- Installing Useful Packages
- Pandas: Handling, Slicing and Extracting Statistic from Time Series Data
- Extracting Statistic from Time Series Data Analyzing Sequential Data by Hidden Markov Model (HMM) Example: Analysis of Stock Market data

## Modules covered under Artificial Intelligence Program

### **Module 12 :** AI with Python – Speech Recognition

- Building a Speech Recognizer
- Visualizing Audio Signals - Reading from a File and Working on it
- Characterizing the Audio Signal: Transforming to Frequency Domain
- Generating Monotone Audio Signal
- Feature Extraction from Speech
- Recognition of Spoken Words

### **Module 13 :** AI with Python – Heuristic Search

- Concept of Heuristic Search in AI
- Difference between Uninformed and Informed Search
- Real World Problem Solved by Constraint Satisfaction
- AI with Python – Gaming
- Search Algorithms
- Combinational Search
- Minimax Algorithm
- Alpha-Beta Pruning
- Negamax Algorithm
- Building Bots to Play Games
- A Bot to Play Last Coin Standing
- A Bot to Play Tic Tac Toe

### **Module 14 :** AI with Python – Neural Networks

- What is Artificial Neural Networks (ANN)
- Installing Useful Packages
- Building Neural Networks
- Perceptron based Classifier
- Single - Layer Neural Networks
- Multi-Layer Neural Networks

## Modules covered under Artificial Intelligence Program

### **Module 15 :** AI with Python – Reinforcement Learning

- Basics of Reinforcement Learning
- Building Blocks: Environment and Agent
- Constructing an Environment with Python
- Constructing a learning agent with Python

### **Module 16 :** AI with Python – Genetic Algorithms

- What are Genetic Algorithms?
- How to Use GA for Optimization Problems?
- Installing Necessary Packages
- Implementing Solutions using Genetic Algorithms
- AI with Python – Computer Vision
- Computer Vision
- Computer Vision Vs Image Processing
- Installing Useful Packages
- Reading, Writing and Displaying an Image
- Color Space Conversion
- Edge Detection
- Face Detection
- Eye Detection

### **Module 17 :** AI with Python – Deep Learning

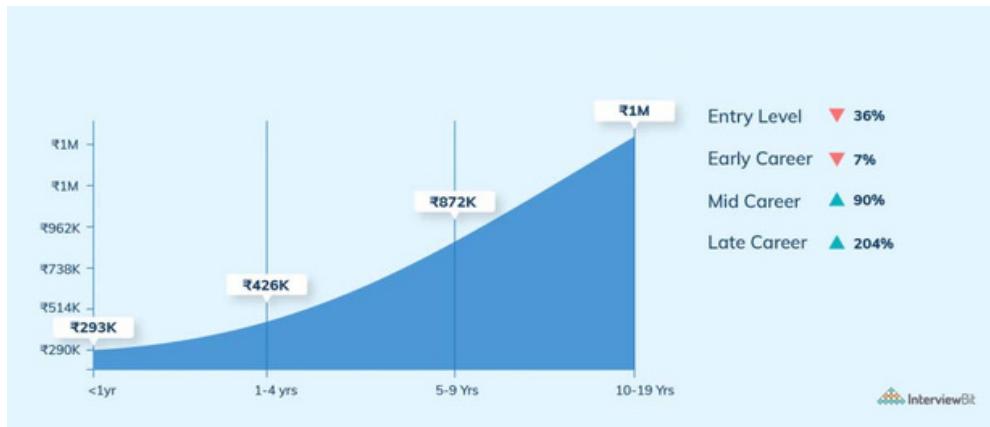
- Machine Learning v/s Deep Learning
- Convolutional Neural Network (CNN)
- Installing Useful Python Packages
- Building Linear Regressor using ANN
- Image Classifier: An Application of Deep Learning

## Modules covered under Artificial Intelligence Program

### **Module 18 :** Project & Interview Preparation

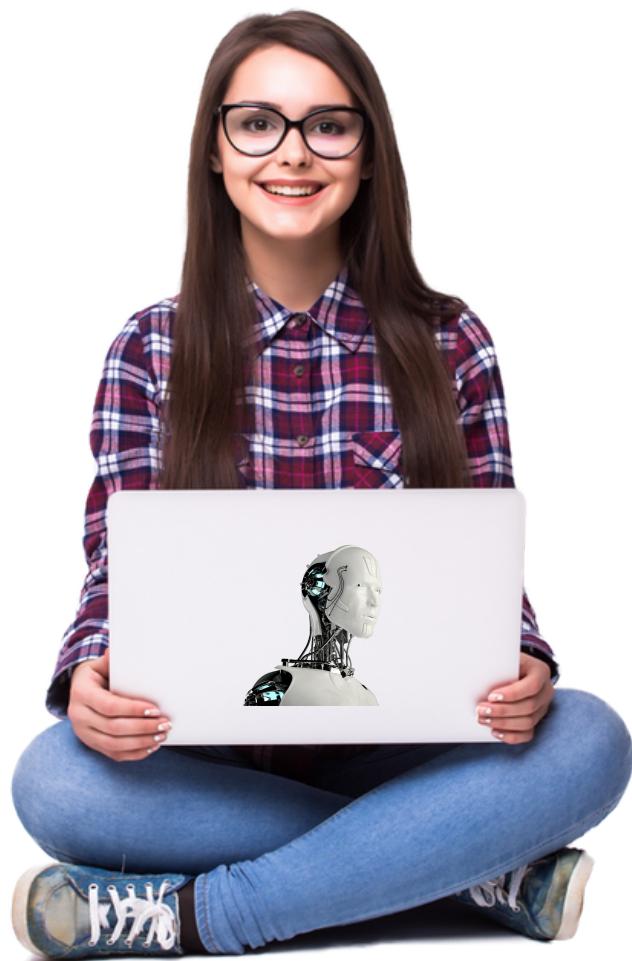
- Project Work
- PD Classes
- Resume Preparation
- Interview Question Preparation

## Benefits as Artificial Intelligence



## Our Training Benefits as Artificial Intelligence Program

- Our complete training is constructed as per the current industry standard.
- Live Project & Industrial Based Training.
- One of the biggest team of Certified Expert & Competent Trainers.
- Easy to understand study material.
- Regular and Weekends classes for IT & Software training is provided.
- Interaction, analysis and case studies are an integral part of the training.
- Smart Labs with Real Latest Equipments.
- Students are free to access the labs for an unlimited number of hours
- Free Study Material, e-PDFs, Video Trainings, Sample Questions.
- Globally Recognized Course Completion Certificate.
- The ability to retake the class at no-charge as often as desired.
- One-on-One attention from instructors.
- Helps students to take knowledge of complex technical concepts.
- Post Training Support will help the students.
- Personality Development & Interview Preparation classes.
- 100% Job Assistance with dedicated training & placement team.



## Join One of the Best Artificial Intelligence Training Institute in India

(In-Class & Live Online Training by Industry Experts)



**5740+**  
Batches Completed

**68806+**  
Students Trained

**470+**  
Skilled Instructors



## Our Latest Reviews

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Hi All, I am Shilpa and i have done my Certification from TechVidya. The study environment is good and trainers are full of knowledge. I personally recommend TechVidya Institute to all the students who looking for quality education and sincere about there future.

I am grateful to TechVidya - both the faculty and the Training & Placement Department. They've made efforts ensuring maximum number of placed students. The Institute started grooming us for placements in the first few months including courses such as Professional Excellence Program and Professional Skills Enhancement. I suggest to join TechVidya which comes under top 10 IT & Software training institute.



Hi I am Amit Kumar and my Enrollment ID with TechVidya is TV230967. I completed my Certification from TechVidya. They provides IT & Software courses in more practical & real scenario basis. Complete project based training help me to sharpen my technical skills.

TechVidya has always believed in helping and guiding its students and it was no different during the placement time. Regular classes held to help us with our aptitude and technical skills. Recommend to all the students who looking for best computer classes with quality education. Thanks TechVidya for explore my career.



# MEET OUR PLACED STUDENTS

## RECORD BREAKING PLACEMENTS 100% JOB PLACEMENT ASSISTANCE



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Newgen



Sumi Singh  
R Systems



Baldev Singh  
Star Solutions

Success Results

Record Breaking  
Placements

JOIN  
NOW



Neha Bisht  
PayTM



Jeewan Singh  
Aavishkar Ent.



Meenakshi  
Chetu India



Prem Prakash  
MPS Limited



## Career Assistance Services



### Career Oriented Sessions



Throughout the Course



### Resume & LinkedIn Profile Building



After 70% of the Course Completion



### Mock Interview Preparation



After 80% of the Course Completion



### 1 on 1 Career Mentoring Sessions



After 90% of the Course Completion



### Assured Interviews



After 90% of the Course Completion



### 1 Year Placement Assistance

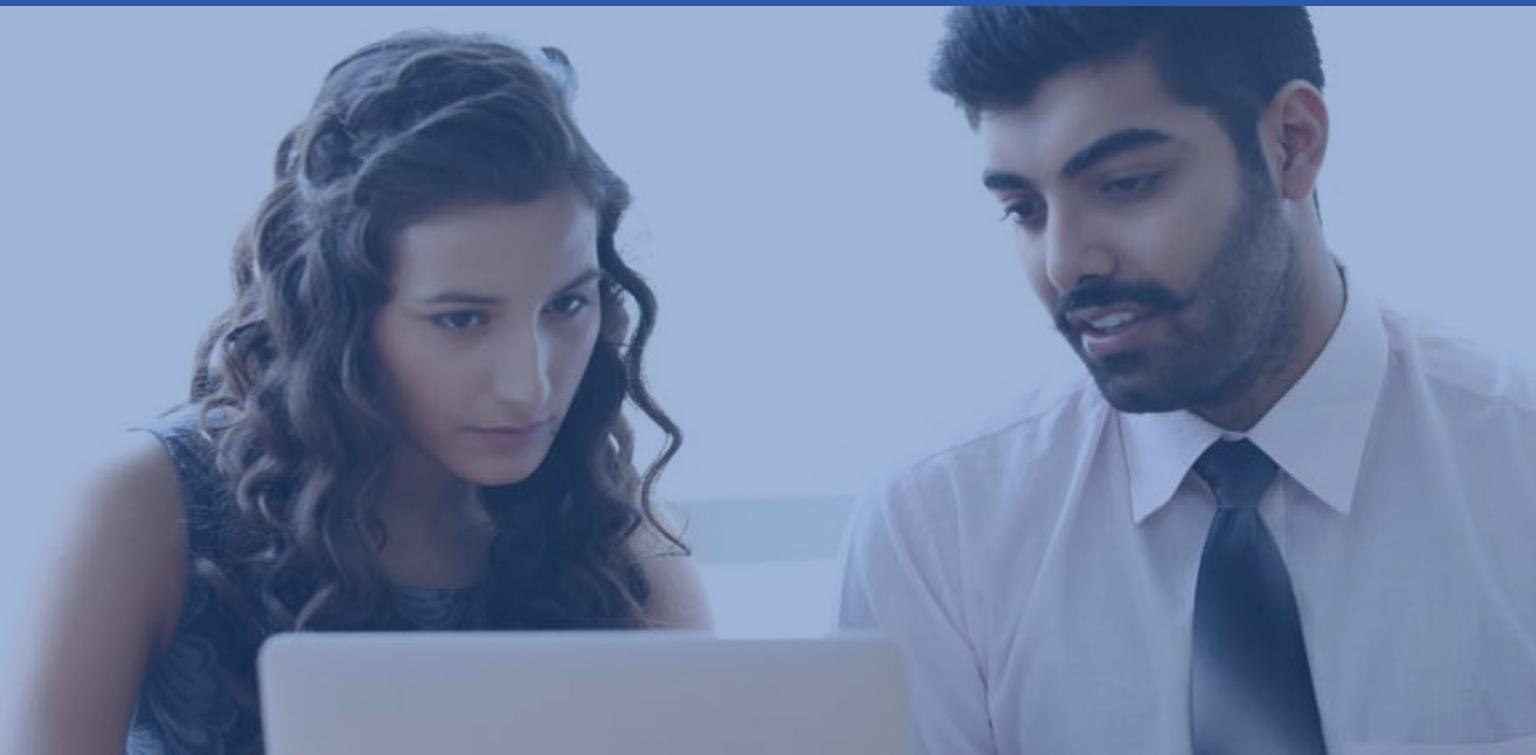


After 100% of the Course Completion



## Our Top Placement Partners





## TechVidya In News

**ET NOW**

08-Jan  
ET Now- Startup Central

**TIMESNOWNEWS.COM**

22-Dec  
What skills in demand & how should upgrade?

**THE HINDU BusinessLine**

14-Nov  
Turning executive education into class act

**Education TIMES**  
GET UNSTUCKED

30-Sep  
TechVidya Campaign #StayUpdatedStayAhead

**YOUR STORY**

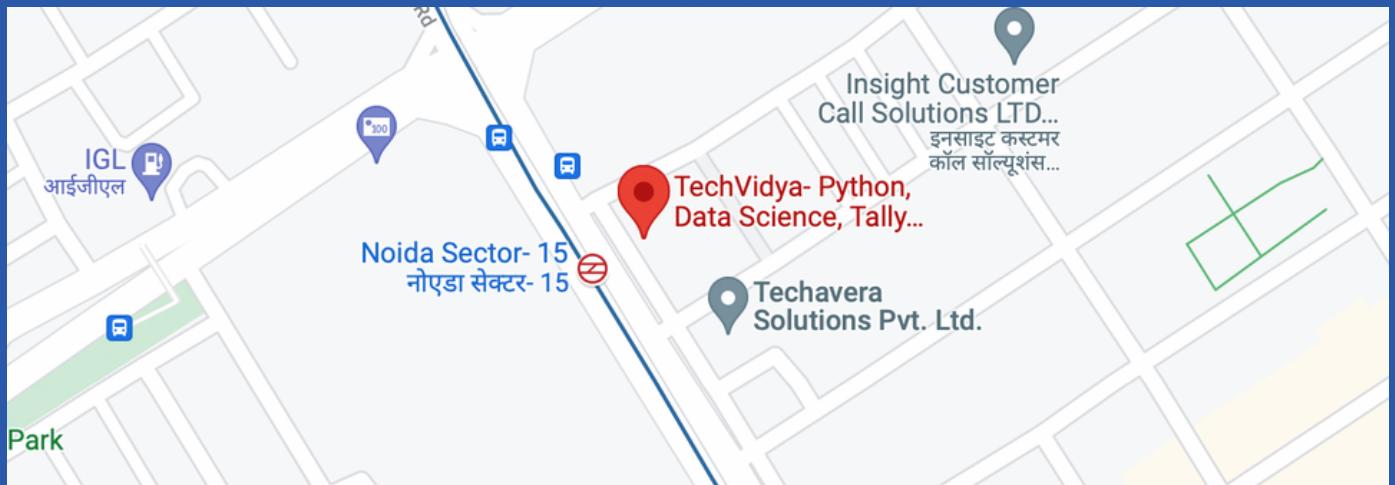
02-Sep  
How TechVidya enhance learning experience

**THE ECONOMIC TIMES**

16-Jun  
The journey of an EduTech Company



## Contact Us



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