



## Deep Learning

4 Weeks / 30 Hours

**Offline/ Classroom**

**Internship & Training Program**

Delhi-NCR | Lucknow | Bhubaneswar | Bhopal | Varanasi

Official Partner



**EISYSTEMS TECHNOLOGIES**

FF-113, Express Greens Plaza, Sector 1

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## Internship & Training Program

### About EISystems

EISystems Technologies is a leading Indian technology identity with operations in 16 states and union territories of India. EISystems (We call it EISys) offers trainings in Machine Learning, Internet of things, Deep Learning, Computer Forensics, Automobiles, Robotics and Socialmedia related solutions for enterprises and student community. Our online edtech domain "Robokwik" have been in among top self learning products provider brands in India. We have trained about 70000 students and impacted around 2 lakhs students through our various outreach initiatives since our founding.

### Our Clientele

Some of the colleges where we had already felt our presence are given below:-

Indian Institute of Science, Bangalore  
Indian Institute of Technology, Bombay  
Indian Institute of Technology, Delhi  
Indian Institute of Technology, Madras  
Indian Institute of Technology, Kanpur  
Indian Institute of Technology, Roorkee  
Indian Institute of Technology, Guwahati  
Indian Institute of Technology (Banaras Hindu University), Varanasi  
Indian Institute of Technology, Indore  
Indian Institute of Technology, Bhubaneswar  
Indian Institute of Technology, Jodhpur  
Indian Institute of Technology, Hyderabad  
National Institute of Technology, Tiruchirappalli  
National Institute of Technology, Warangal  
National Institute of Technology, Calicut  
National Institute of Technology, Patna  
National Institute of Technology, Jalandhar  
National Institute of Technology, Jaipur  
National Institute of Technology, Durgapur  
National Institute of Technology, Surat  
National Institute of Technology, Allahabad  
Indian Institute of Information Technology, Allahabad  
ABV- Indian Institute of Information Technology & Management, Gwalior  
College of Engineering Guindy,  
Anna University, Chennai  
PSG College of Technology, Coimbatore  
JNTUH College of Engineering, Hyderabad

and more than 100 other engineering colleges.

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### Prerequisites

Participants from 2<sup>nd</sup> year / 3<sup>rd</sup> year / 4<sup>th</sup> year of CSE/IT/ICT/BSc IT/MCA/BCA or related domains will get more benefited after joining this program. It is to note that those students who have already completed their project in Machine Learning are eligible to join this program as this is an advance level program.

### What to bring during training program?

Here's the checklist

1. Fully charged laptop with Microsoft Windows configuration.
2. Laptop Charger/ Adapter
3. USB Mouse for designing purpose.

### What we are expecting for COVID19 prevention?

During visit at our center we expect students / interns :-

1. To wear facemask during training session enough to cover mouth & nose.
2. To have a bottle of sanitizer all the time.
3. To come with a bottle of drinking water with enough water as it will not be provided at center.
4. To use Aarogya Setu app otherwise entry will not be allowed.
5. Not to use or atleast discourage using of washroom at center.
6. To follow social distancing norms and follow all government guidelines regarding COVID19 prevention.

### Training Deliverables

Every participant will get all under mentioned deliverables

1. 30 hours classroom training by specialized trainer.
2. Certificate of Internship with project mentioning on it.
3. EISystems Access ID Card & Stylish Storage Folder
4. Notepad & Pen

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## Course & Content

All of the sessions will be practical oriented, kindly look on the syllabus which we are going to cover during training days.

### Session 1

#### Introduction of Artificial Intelligence, Machine Learning & Deep Learning

- Introduction of Machine Learning
- Introduction of Artificial Intelligence
- Brief Introduction to Machine Learning for Artificial Intelligence
- Classification of Machine Learning and Deep Learning
- Difference between Machine Learning and Artificial Intelligence
- Machine Learning Techniques
- Types of Learning
- Machine Learning System Design
- Supervised Learning- Regression
- Classification
- Future scope, Machine Learning & Artificial Intelligence

### Session 2

#### Introduction Neural Network

- Neuron
- The Neuron Diagram
- Neuron Models
- Activation function
- Binary Step Function
- Linear Function
- Sigmoid
- Tanh
- ReLU
- Leaky ReLU
- Softmax
- Single-layer feed-forward
- Multi-layer feed-forward
- Feedforward Neural Networks, Convolutional Neural Networks

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### Session 3

#### Machine Learning & Deep Learning Algorithms

- Logistic Regression
- Multilayer Perceptron
- Naive Bayes Classification
- Deep Convolutional Network
- Deep Reinforcement Learning
- Backpropagation
- K-Means Clustering
- Support Vector Machines (SVM)
- Convolutional Neural Networks(LeNet)
- K-Nearest Neighbors (KNN) Algorithm
- Long Short-Term Memory Units (LSTMs)

### Session 4

#### Python / Anaconda

- Introduction to Python and Anaconda
- Conditional Statements
- Looping, Control Statements
- Lists, Tuple ,Dictionaries
- String Manipulation
- Functions
- Installing Packages
- Introduction of various tools
- Introduction of Anaconda
- Working on spyder ,Jupyter notebook

### Session 5

#### Working on Various Python Library

- Installing library and packages for Machine Learning and Data Science
- Matplotlib
- Scipy and NumPy
- Pandas
- IPython Toolkit
- Scikit-learn

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### Session 6

#### TensorFlow

- Introduction of Tensorflow
- Basics of Tensorflow
- Graph in TensorFlow
- Placeholders, Constants, Variables
- Common data stored in Tensors
- Linear and Logistic Regression in TensorFlow
- Image classifier using convolutional neural network

#### Project

- Classifying MNIST digits using Logistic Regression
- Simple Spam-Detecting Machine Learning Classifier
- OCR of Hand-written Data using KNN
- LSTM Networks for Sentiment Analysis
- Deep learning model for Stock Price prediction using TensorFlow
- Image Segmentation using Deconvolution layer in Tensorflow
- Develop a Predictive Analytics Model for a complex dataset
- KNN for classification & Hand written digit recognition
- Real Time Object Classification Using Tensorflow
- Face Detection

#### Updation & Duration of Course

The course (given above) is a proposed structure and we are currently working to update it considering industry requirements, we may add / delete / modify sessions in it without any prior notification. The internship program is divided into two parts i.e. training period (2 weeks) and project period(2 weeks) however total duration of program will remain 4 weeks only.

#### Disclaimer

A session doesn't necessarily depict the day count or the day on which it is going to be covered, we may cover more than or lesser than one session in a day and even alter/amend the schedule by rearranging of session(s) by removing/adding anything from/to overall course, the course structure may differ center wise, Also this is to notify that Eisystems Technologies is nowhere specifying that center in Varanasi will be IIT (BHU) Varanasi campus, our center in Varanasi is different. Fees once paid will not be refunded, Please check our refund policy given on website before proceeding for payment. It is important to note that IIT (BHU) Varanasi or any of its body is not charging anything for this training program and whatever amount which you will be paying will either go to Eisystems Technologies or its associates or both.

#### COVID-19 Policy

No amount will be refunded in case of non conduction of program due to government guidelines for COVID-19 prevention and instead remaining / all sessions will be conducted online through mentor led training however we will also give flexibility to students/ attendee to continue the remaining session when things normalize at other center.

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