



**TechieNest**  
Transforming Engineers to Technocrats

presents

# Machine Learning with Python Workshop



in collaboration with



# TRENDING NOW

# MACHINE LEARNING



## OUR QUALITY NETWORK

### *Celebrating the alliance*

with the most prestigious institutes of our country  
TechieNest takes proud on its Success everyday...

Certified by the **Standards of ISO** and **leading Institutes** of the Nation we have proven to be a symbol of faith and dignity for our students.



IIT Bombay



IIT Kanpur



IIT Roorkee



IIT Jodhpur



IIT Indore



IIT Hyderabad



IIT Bhubaneswar



IIT Mandi



NIT Raipur



MNIT Jaipur



NIT Jalandhar



MANIT Bhopal



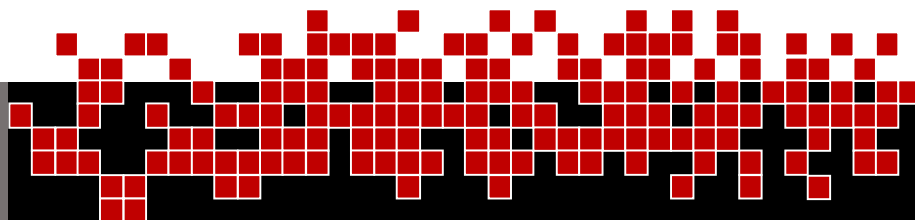
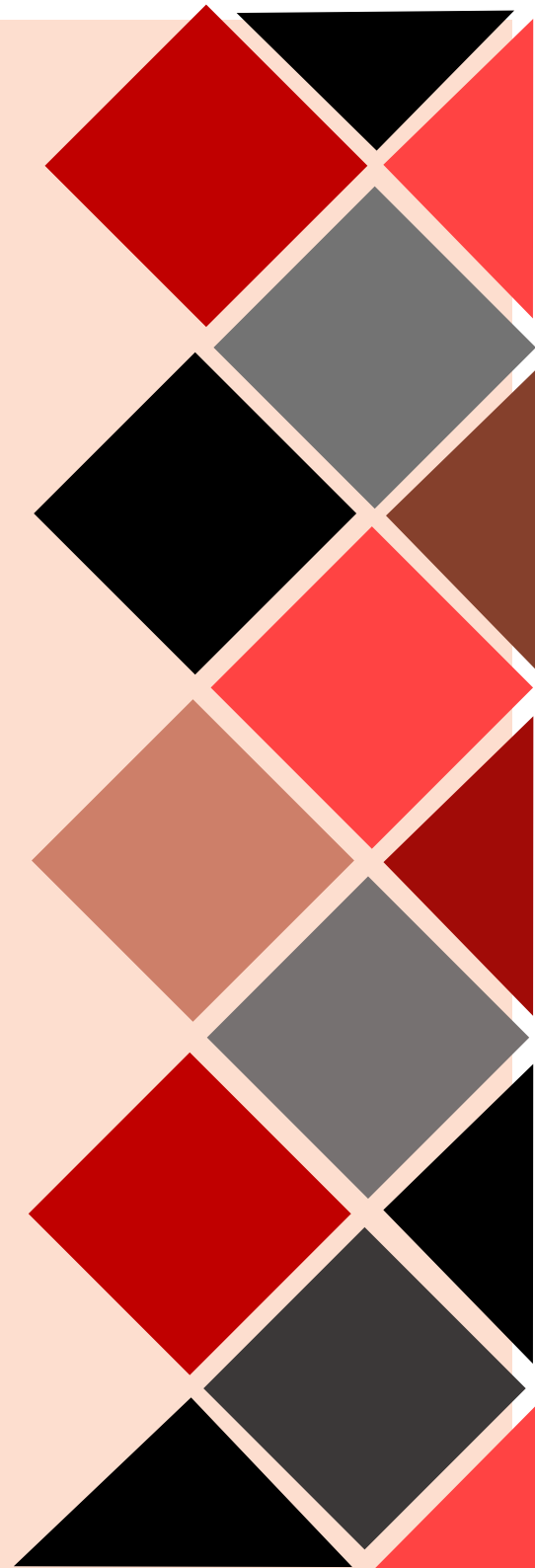
NIT Srinagar



NIT Trichy

## OUR FORTE

- ✓ Internet of Things (IoT)
- ✓ Aeromodelling
- ✓ Embedded Systems
- ✓ Robotics
- ✓ MATLAB & Machine Vision
- ✓ VLSI & VHDL
- ✓ Ethical Hacking
- ✓ Surface Computing
- ✓ Android App Development
- ✓ Networking
- ✓ Automation (PLC & SCADA)
- ✓ Arduino
- ✓ PCB Designing
- ✓ Raspberry Pi
- ✓ Image Processing
- ✓ MSP430 (Texas Instruments)
- ✓ IC Engine



### ***What is machine learning?***

- Introduction to machine learning
- Understanding the need
- Understanding Big data and machine learning
- Running machine learning under Linux platform
- Why Linux is important for machine learning with respect to future
- Role of Python and R programming in this domain
- Basic Introduction of Python syntax and programming logics
- Deep dive with Supervised and Unsupervised learning

### ***Python programming***

- Basic of python and why python for machine learning
- Installation of software on different OS.
- Understanding basic syntax with data types
- Number, string, list, tuple and dictionary
- Loops, conditions
- User input and user defined functions
- How to use libraries
- Creating and importing own library

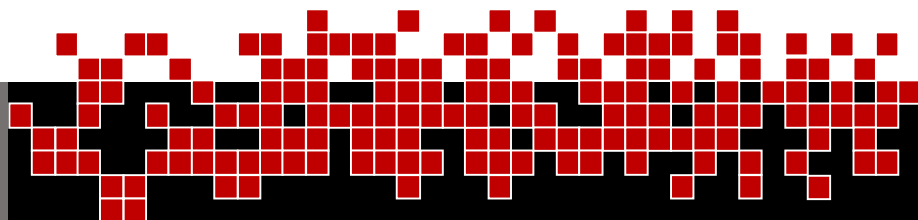
### ***Installation of Python Libraries in System***

#### ***Numpy***

- Formation of Arrays and its operation
- Working with multidimensional arrays using numpy
- Data formation and matrix manipulations
- Use of Numpy in Data Science

#### ***Matplotlib***

- Data Visualisation in linear graphs
- Bar Graph
- Pie Charts
- Multiple data visualisation in one plotz



## **Supervised and Unsupervised Learning**

### ***Working with Python for ML***

- Types of learning
- Supervised Learning lab with Hello World Program
- Classification and regression
- Entropy and Information Gain
- Training your machine with real time datasets

### **Project:- Creating own ML datasets and it's implementation**

### ***Working with classification algos***

- KNN Algo
- KNN algo with deep dive

### ***Pandas***

- Introduction to dataframes
- Reading / writing data files
- Structure of dataframes
- Use of dataframes with ML
- Datasets reading from Scikit-Learn

### **Project:- Designing of ML system for real time datasets**

### ***OpenCV***

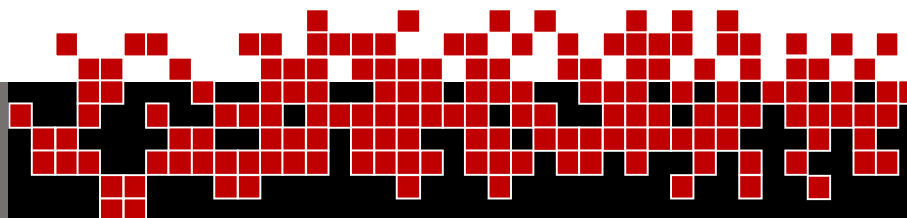
- Image Processing with Python
- Image Read and type conversions

### ***Deep Learning, Image search and recognition***

- Concept of neural network
- Understanding neural networks
- Searching for image
- Registering image for training model
- Training image datasets
- Recognition of different images to detect face

### ***Project:- Face Recognition System.***

### ***Query Session***



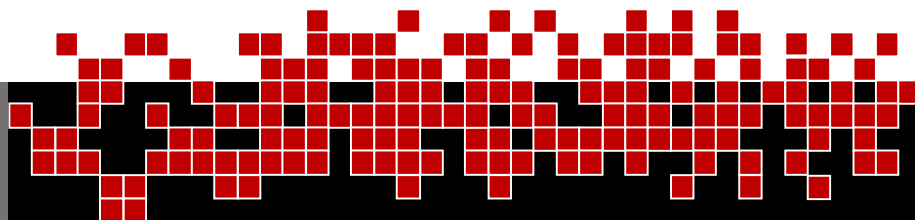
## ARRANGEMENTS

- ✓ A seminar hall/Class room with seating capacity of 100 students
- ✓ One projector.
- ✓ 2 Collar mike with sound system.
- ✓ White board and marker.
- ✓ Workshop coordinators(3-5)
- ✓ Laptop charging points.
- ✓ One laptop/PC to each group.

By College  
Coordinator

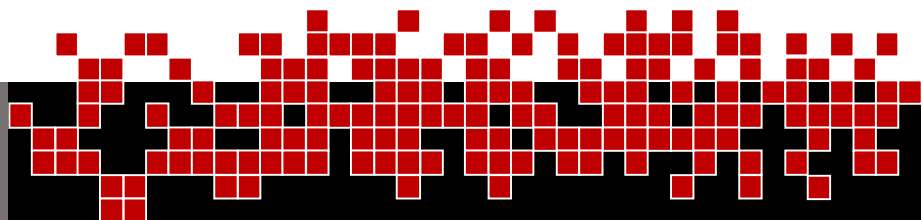
## BENEFITS

- ✓ Acquaint yourself with practical knowledge.
- ✓ Workshop taken by Exceptionally Qualified and Professional Trainers actively involved in Research & Development.
- ✓ Learn your Area of Interest directly from Industry Experts.
- ✓ Scales up your CV/ Resume in Technical while boosting your Logical Abilities.
- ✓ Brings Confidence in you for Technical rounds of Interview.
- ✓ Lifetime assistance on any of your projects.



## TAKE AWAYS

- ✓ Certificate of Participation
- ✓ Certificate of Coordination
- ✓ Certificate of Appreciation to College
- ✓ Relevant Software.
- ✓ Study Material (Soft Copy) FREE.
- ✓ A TechieNest notepad

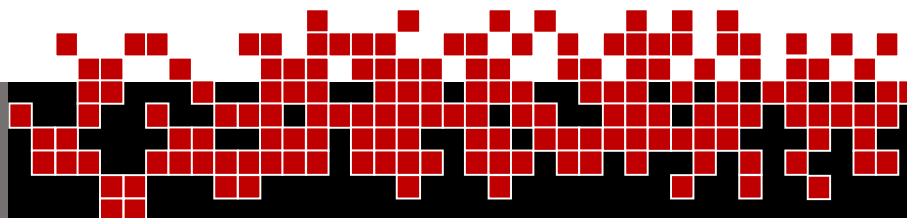




# MACHINE LEARNING



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## Centres

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