



# Electronics & ICT Academy

(Under [Ministry of Electronics and Information Technology, Government of India](#))  
Indian Institute of Technology Guwahati, Guwahati, Assam, Pin 781039

Phone: +91-361-2583182, 2583009 Email: [eictacad@iitg.ac.in](mailto:eictacad@iitg.ac.in)

## Faculty Development Programme

On

## “Machine Learning – Applications & Frameworks”

Venue: SASTRA Deemed University

Date: 24-29 September, 2018

| Date                  | Time                | Topic  |
|-----------------------|---------------------|--|
| 24-09-2018<br>(Day 1) | 08:30 am-9:00 am    | Registration & Reporting                       |
|                       | 9:00 am-9:30 am     | Inauguration                                   |
|                       | 9:30 am-11:00 am    | Introduction to Machine Learning               |
|                       | 11:00 am-11:15 am   | Tea Break                                      |
|                       | 11:15 am-1:15 pm    | Introduction to Python and Python datatypes    |
|                       | 1:15 pm-02:15 pm    | Lunch Break                                    |
|                       | 02:15 pm-03:45 pm   | Loops, Functions and Classes in Python         |
|                       | 03:45 pm-04:00 pm   | Tea Break                                      |
|                       | 04:00 pm-05:15 pm   | Imports and Implementation of algorithms       |
|                       | 05:15 pm – 05:30 pm | MCQ  |
| 25-09-2018<br>(Day 2) | 09:00 am-11:00 am   | Fundamentals of Big Data Analytics             |
|                       | 11:00 am-11:15 noon | Tea Break                                      |
|                       | 11:15 am-01:15 pm   | Image Data Models and Image Fusion             |
|                       | 01:15 pm-02:15 pm   | Lunch Break                                    |
|                       | 02:15 pm-03:45 pm   | Image Enhancement and Batch Processing         |
|                       | 03:45 pm-04:00 pm   | Tea Break                                      |
|                       | 04:00 pm-05:30 pm   | Feature Extraction – Remote sensing data       |
|                       | 05:15 pm – 05:30 pm | MCQ  |
| 26-09-2018<br>(Day 3) | 09:00 am-11:00 am   | Introduction to AI                             |
|                       | 11:00 am-11:15 am   | Tea Break                                      |
|                       | 11:15 am-01:15 pm   | Techniques of Machine Learning                 |
|                       | 01:15 pm-02:15 pm   | Lunch Break                                    |
|                       | 02:15 pm-03:45 pm   | Data Processing, Regression and Classification |



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|                       |                     |  |
|-----------------------|---------------------|--|
|                       | 03:45 pm-04:00 pm   | Tea Break                                      |
|                       | 04:00 pm-05:30 pm   | SVMs and Unsupervised Learning                 |
|                       | 05:15 pm – 05:30 pm | MCQ  |
| 27-09-2018<br>(Day 4) | 09:00 am-11:00 am   | Introduction to Deep Learning                  |
|                       | 11:00 am-11:15 am   | Tea Break                                      |
|                       | 11:15 am-01:15 pm   | Why DL and Building blocks of a Neural Network |
|                       | 01:15 pm-02:15 pm   | Lunch Break                                    |
|                       | 02:15 pm-03:45 pm   | RCNN and FRCNN                                 |
|                       | 03:45 pm-04:00 pm   | Tea Break                                      |
|                       | 04:00 pm-05:30 pm   | Yolo and Yolo implementation                   |
|                       | 05:15 pm – 05:30 pm | MCQ  |
| 28-09-2018<br>(Day 5) | 09:00 am-11:00 am   | Introduction to different datasets             |
|                       | 11:00 am-11:15 am   | Tea Break                                      |
|                       | 11:15 am-01:15 pm   | Keras, Tensorflow and PyTorch                  |
|                       | 01:15 pm-02:15 pm   | Lunch Break                                    |
|                       | 02:15 pm-03:45 pm   | RCNN implementation using TF and Keras         |
|                       | 03:45 pm-04:00 pm   | Tea Break                                      |
|                       | 04:00 pm-05:30 pm   | GPU optimization of the codes                  |
|                       | 05:15 pm – 05:30 pm | MCQ  |
| 29-09-2018<br>(Day 6) | 09:00 am-11:00 am   | Problem Statement for the Project              |
|                       | 11:00 am-11:15 am   | Tea Break                                      |
|                       | 11:15 am-01:15 pm   | Project completion and QA                      |
|                       | 01:15 pm-02:15 pm   | Lunch Break                                    |
|                       | 02:15 pm-03:45 pm   | Project completion and QA                      |
|                       | 03:45 pm-04:00 pm   | Tea Break                                      |
|                       | 04:00 pm-05:00 pm   | Project Solution Discussion and QA             |
|                       | 05:00 pm – 05:15 pm | MCQ  |
|                       | 05:15 pm onwards    | Valedictory and Certificate Distribution       |