

on

"Machine Learning and its Applications "



Under the aegis of

**Electronics & ICT Academy
IIT Roorkee**



October 27-31, 2018

Experts from Academia/Industry

Dr. Partha
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IIT Roorkee

Dr. Balasubramanian
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IIT Roorkee

Supported by

Ministry of Electronics & Information
Technology
Government of India

Venue



**Greater Noida Extension Centre
Indian Institute of Technology
Knowledge Park II, Greater Noida-
201310**

Why ML?

Machine learning is a method of data analysis that automates analytical model building. Machine learning techniques are becoming ever necessary due to various factors like growing volumes and varieties of available data, computational processing that is cheaper and more powerful, and affordable data storage. Machine learning methods build quick and automatically producing models that can analyze bigger, more complex data and deliver faster, more accurate results on a very large scale. This analysis process further facilitates organizations in identifying profitable opportunities and avoiding unknown risks.

Objective of the Course

- To familiarize the participants with some basic learning algorithms, techniques & their applications, as well as general questions related to analyzing and handling big data sets.
- Several software libraries and datasets publicly available will be used to illustrate the application of these algorithms.
- The emphasis will be thus given on machine learning algorithms and applications.
- Knowledge and hands-on training of various software for Machine Learning and applications.
- Introduction of real-life applications of the Machine Learning.
- Training with the recent developments in Machine Learning in industries.

Program Features

- The program is split into lectures and labs/hands-on sessions.
- Hands-on experience on basic and advanced-level topics.
- Interaction & learning with experts from academia & industry.
- Certificates to participants by E&ICT Academy IIT Roorkee.

Focus Areas

- Basic machine learning concepts and examples.
- Nearest-neighbor algorithms.
- Support vector machines.
- Kernel methods.
- Decision trees.
- Ensemble methods (Boosting, Bagging).
- Logistic regression.
- Multi-class classification (Conditional Maxent models, binary classifiers and error-correction codes).
- Regression (linear regression, Kernel Ridge Regression, Lasso, neural networks).
- Clustering (K-means, DT clustering).
- Dimensionality reduction (PCA, KPCA).
- Introduction to reinforcement learning.
- An insight on deep learning algorithms.
- Various Applications in Imaging and Video Analytics.

Benefits and Outcomes of the Course

- The program would help the participants to understand the key concepts behind Machine Learning.
- Participants would also acquire the skills needed to work with the problems of feature extraction methods, regression classification techniques such as Supervised, Unsupervised and Reinforcement.
- Demonstrations of popular software will be done by the expert from the industry.
- Hands-on experience in working with different software will be provided in Machine Learning.
- Interaction with industry person(s) will be established with possible collaborations.

Coordinators

- Dr. Sanjeev Manhas P.I. E&ICT Academy IIT Roorkee
- Dr. Partha Pratim Roy, Assistant Prof. CSE Dept. IIT Roorkee
- Dr. Balasubramanian Raman, Associate Prof. CSE Dept. IIT Roorkee

Who Can Attend ?

Program is open to faculty members/research scholars/PG students from colleges/universities, and industry personnel working in the concerned/allied discipline.

Registration Fee

Faculty members: ₹ 2,500/-

Research scholars: ₹ 2,500/-

Persons from Industry: ₹ 3,000/-

Payment Details

DD in favor of "Dean SRIC IIT Roorkee" payable at Roorkee
"OR"

Make Online Payment by NEFT/RTGS on given detail

Account Name: Research Project, IIT Roorkee

Account Number: 33012172097

IFSC code: SBIN0001069

How to Apply

Step 1: Participants may fill the registration form available on the link "Apply Here" for the relevant course on eict.iitr.ac.in

Step 2: Make Payment

OR

Step 3: Send a duly filled-in registration form along with Demand Draft to Academy address.

Mr. Prateek Sharma, EICT Academy, ECE Department, IIT Roorkee-247667

Important Dates

**Last Date For Online
Registration :
October 22, 2018**

EICT Academy IITR

Electronics and ICT Academy (E&ICT) at IIT Roorkee (funded by Ministry of Electronics and Information Technology) aims to enrich and upgrade teaching and research competences of engineering faculties of institutes/colleges by conducting courses and workshops in fundamentals as well as emerging areas of E&ICT and enabled areas. The programs are conducted by well-known industry partners, resource persons from leading academia and experts from renowned R&D organizations.



Activities of the Academy

- Specialized training on basic and advanced level topics with hands-on experience in the emerging areas of Electronics & ICT.
- Setup the activity centers to conduct FDPs locally at institutes/colleges.
- Curriculum development for the industry.
- Continuing Education Programme for students/working professionals.
- Design, develop and delivery of specialized modules for specific research areas in industry.

Faculty Development Program

on

"Machine Learning and its Applications"



REGISTRATION FORM



Applicant Name _____

Gender: _____

Category (GEN/OBC/SC/ST): _____

Designation: _____

Name and Address of the
Organizatio/Institute: _____

City/Town: _____

Email: _____

Phone Number: _____

Do you need Accommodation?
(Yes/No): _____

DD Number: _____

Date: _____

Issuing Bank: _____

Payable at: _____

Signature of the Applicant

Contact Us

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