

## ORGANIZING COMMITTEE

- Patron : **Prof. Sivaji Bandyopadhyay**  
Director NIT, Silchar
- Chairman : **Dr. Arup Bhattacharjee**  
HOD, Dept. of CSE, NIT Silchar
- Coordinators from NIT Silchar:  
**Dr. S. K. Biswas**  
Assistant Professor, Dept. Of CSE  
**Dr. Malaya Dutta Borah**  
Assistant Professor, Dept. Of CSE  
**Dr. Anupam Biswas**  
Assistant Professor, Dept. Of CSE
- Co-Coordinator from GUIST, Guwahati  
**Dr. Parimita Sarma**  
Asst. Professor, Dept. of IT, GUIST, Guwahati.
- **Advisory Members:**
  - Dr. Biswajit Purkayastha      ○ Dr. Ripon Patgiri
  - Mrs. Ujjwala Baruah          ○ Mr. Umakanta Majhi
  - Dr. Pinky Roy                  ○ Dr. Shyamosree Pal
  - Dr. Samir K. Borgohain      ○ Dr. Shyamapada Mukherjee
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  - Mr. Panth Kanti Nath        ○ Dr. Thoudam Doren Singh
  - Dr. Dalton M. Thounaojam   ○ Dr. Partha Pakray
  - Dr. Badal Soni                ○ Dr. Suganya Devi K.

## REGISTRATION FORM

1. Name: \_\_\_\_\_
2. Designation: \_\_\_\_\_
3. Institution/Organization: \_\_\_\_\_
4. Address for communication: \_\_\_\_\_
5. E mail: \_\_\_\_\_
6. Phone/Mobile No: \_\_\_\_\_
7. Highest educational qualification: \_\_\_\_\_
8. Accommodation required (Tick): Yes/No
9. Any other information: \_\_\_\_\_
10. Details of Registration Fee:
  - Amount: \_\_\_\_\_
  - Transaction Ref. No.: \_\_\_\_\_
  - Transaction Date: \_\_\_\_\_
  - Bank: \_\_\_\_\_ Branch: \_\_\_\_\_
  - Place: \_\_\_\_\_
  - Date: \_\_\_\_\_

Sign and Seal of HOD / Section-In-Charge

Signature of the applicant

## ABOUT NIT SILCHAR

At present NIT Silchar offers six undergraduate courses in

- Civil Engineering
- Computer Science & Engineering
- Mechanical Engineering,
- Electrical Engineering,
- Electronics and Telecommunication Engineering
- Electronics & Instrumentation Engineering

Apart from the above, some AICTE approved Post-Graduate courses are also offered by the institute.

The department of Computer Science & Engineering offers B. Tech., M. Tech. and Ph.D programmes. With sound Vision and Mission, this department provides a platform for nurturing engineers and researchers to lead the country in particular and the entire World in general.

The department is well-equipped with ultra-modern facilities for research. To name a few the department has Blade Server (IBM 7 blades), Thermal Cameras, Workstations, latest configured Desktop PCs, etc.

For details of the program and course contents etc., please log on to NITS Website: [www.nits.ac.in](http://www.nits.ac.in)

## HOW TO REACH NIT SILCHAR

There are daily direct flights from Kolkata, Guwahati and we have good train connectivity to major cities in India. Taxis are available from Airport to NIT Silchar. Silchar is also well connected by road from Guwahati.



## ONE WEEK WORKSHOP ON DATA ANALYTICS WITH MACHINE LEARNING TECHNIQUES (Under TEQIP – III)



From 29 July 2019 to 02 August 2019

at

National Institute of Technology, Silchar

Organised by

Dept. of CSE, NIT Silchar

In collaboration with

Gauhati University Institute of Science  
and Technology, Guwahati



Last date of registration: 26 July 2019  
Venue: Dept. of CSE, NIT Silchar, Assam

## INTRODUCTION

An exceptional scientific revolution in the field of Machine Learning (ML) has been initiated recently as machines are becoming more powerful than the human brain at analyzing data and giving insight to it. The primary objective of ML is to assist in decision making. Exploiting such tremendous potential of machine learning will be a key component in creating intelligent endeavors of future. ML has seen tremendous rise in past few years due its applicability to various industries and different functional areas of day to day lives. Today ML is used for driving innovation and used as competitive strategy by several organizations.

This workshop will emphasize on data processing and its use in various fields with the involvement of machine learning algorithms like Supervised, Unsupervised, Reinforcement and Evolutionary learning. This workshop will primarily introduce and offer the participants an opportunity to understand the mathematical basis of ML along with hands on sessions. The workshop will include various rigorous sessions lead by experts from both academic as well as industrial background having amazing research works in a number of application areas including Medical Image Analysis, Genomics, Healthcare and Finance.

## OBJECTIVE

The main objective of the workshop is to disseminate and promulgate the basic ideas and research directions among young Research personals/Faculty Members /Ph.D. scholars / M. Tech. scholars about the various directions and possibilities of Data Analytics with Machine Learning Techniques. This workshop also focuses to show how machine learning algorithms are used for automation & innovation.

## CONTENTS

**Supervised Learning Algorithms:** Logistic Function, Estimation of probability using Logistic Regression, Naive Bayes algorithm, Decision Tree, SVM, Feature Selection in Logistic Regression, Ensemble methods – Random Forest and Boosting, Application of Supervised Learning Algorithms in health care, financial services etc.

**Unsupervised Learning Algorithms:** K-means Clustering and Hierarchical Clustering, Data Reduction Techniques, Factor Analysis etc.

**Reinforcement Learning Algorithms:** Markov Chains, Markov Decision Process.

Practical implementations of these Machine Learning ideas for the collected data are also to be done during the hands on sessions.

## WHO CAN ATTEND

Program is open to Faculty Members, Research Scholars, PG & UG Students, Lab Technicians and Project Staffs from Universities, Colleges & Schools. Industry and persons working in the concerned/allied discipline may also apply.

## ACCOMODATION

All the outstation participants will be provided accommodation on payment basis in the Guest House of the Institute, subject to availability. No TA and DA will be paid to the participants.

## PROGRAM

Technical sessions and discussions will be conducted by experts from top software industries in R & D which will focus on industrial applications of Machine Learning tools and techniques.

## HOW TO APPLY

Participants are requested to fill up the registration form and to send the softcopy to [abanumail@gmail.com](mailto:abanumail@gmail.com). Account details for Online transfer of the Registration fee is as follows:

**Account Name :** Director, NIT Silchar  
**Account No. :** 10521277057  
**Bank Name :** State Bank of India  
**IFSC Code :** SBIN0007061  
**Bank Branch :** NIT Silchar  
**Bank Address :** R.E.C. Silchar, Dist.- Cachar, Assam

### Fee Details:

Internal Students	Rs. 500/-
External Students	Rs. 1000/-
Internal Faculty members	Rs. 1000/-
External Faculty members	Rs. 3000/-
Industry Persons	Rs. 5000/-

## PROGRAM OUTCOMES

The participants are expected to understand:

- ✓ How to collect appropriate type of useful data for their project or research work.
- ✓ How to process the collected data such that those can be used in various machine learning tools.
- ✓ How to apply machine learning tools and techniques to solve the problems.
- ✓ When and why specific machine learning tools and techniques are to be applied for solving specific problems.

## EXPERT DETAILS

- Dr. Bhaskar Biswas (IIT-BHU, Varanasi)
- Dr. Rajni Jindal (DTU-Delhi)
- Dr. Vijay Bhaskar Semwal (MANIT Bhopal)
- Dr. Sandipan Dandapat (Microsoft Research Lab)
- Dr. Pinaki Bhaskar (Samsung Research Lab)
- Dr. Nidul Sinha (NIT Silchar)
- Dr. Swarup Roy (Sikkim University)

## CONTACT DETAILS

For more details or any queries please contact:

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**Dr. Anupam Biswas**  
Email: [abanumail@gmail.com](mailto:abanumail@gmail.com)

**Dr. Parismita Sarma**  
Email: [pari@gauhati.ac.in](mailto:pari@gauhati.ac.in)