

One Week

Self-Financed Workshop

On

Data Analytics and Machine Learning with

R (DAMLR-2018)

From: 28<sup>th</sup> May- 1<sup>st</sup> June, 2018

Data Analytics and  
Machine Learning  
with R  
DAMLR-2018



Organized by

Department of Computer Science & Engineering  
Motilal Nehru National Institute of Technology  
Allahabad  
Allahabad-211004, Uttar Pradesh, India

## THE INSTITUTE

Motilal Nehru National Institute of Technology (MNNIT) Allahabad is one of the premier National Institute of Technology (NIT) in India. It is committed to achieve quality and excellence in academic pursuits. Established in 1961, as a Regional Engineering College, a joint enterprise of Government of India (GOI) and Government of Uttar Pradesh, the institute was transformed into NIT on June 26, 2002. With the enactment of NIT Act-2007, the Institute has been granted the status of institution of national importance w.e.f. August 15, 2007.

The Institute offers various undergraduate and postgraduate courses such as B.Tech., M.Tech., MCA, MBA, M.Sc., M.S.W and Ph.D. degree. It has been recognized by GOI as one of the Quality Improvement Programme (QIP) centre for M.Tech. and Ph.D. program. Also, it is a lead Institution under World Bank funded GOI Project on Technical Education Quality Improvement Programme (TEQIP).

## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

For the first time in India under graduate course in Computer Science and Engineering was offered in 1977 under Electrical Engineering Department with a modest strength of 10 students.

The Department of Computer Science & Engineering offers courses leading to a Bachelor of Technology in Computer Science & Engineering and Bachelor of Technology in Information Technology. It also offers a Master of Technology in Computer Science & Engineering, Master of Technology in Software Engineering, Master of Technology in Information Security, and Master of Computer Application (M.C.A.). Further, the department also enrolls candidates for Ph.D. program.

## ALLAHABAD

The city of Allahabad is among the largest cities of Uttar Pradesh. It is situated at the confluence of three rivers- Ganga, Yamuna and the mythological Saraswati. The sacred meeting point is known as Sangam. The city also known as PRAYAG has many governmental institutions which include MNNIT Allahabad, Allahabad University, HRI, IIIT Allahabad, High Court of UP, AGUP, CDA Pension, State Government Board and various tourist places like Anand Bhawan, Khusroo Bagh etc.

## COMMITTEE

### ORGANIZING COMMITTEE

#### **Patron**

Director, M.N.N.I.T. Allahabad

#### **Chairman**

Head, Department of Computer Science and Engineering

#### **Course Coordinators**

**Prof. M.M. Gore**, Department of C.S.E.

**Dr. A. K. Singh**, Department of C.S.E.

#### **Student Coordinators**

1. Mr. Vijay Kumar Dwivedi, Department of C.S.E.
2. Mr. Abdul Aleem, Department of C.S.E.
3. Mrs. Jagriti Singh, Department of C.S.E.
4. Ms. Garima Singh, Department of C.S.E.

### ADVISORY COMMITTEE

All the Professors of Computer Science and Engineering Department.

## ADDRESS FOR COMMUNICATION

Complete registration form, accompanied by the demand draft should reach the course coordinator on or before 21<sup>st</sup> May, 2018. The applicants are also requested to e-mail the scanned copies of the application and the demand draft.

**No documents need to be posted if payment of fees is done through NEFT and the registration has been done online. Intimation should be done via e-mail along with an attachment of NEFT receipt showing details of NEFT transaction.**

The contact details are:

### **Co-ordinator DAMLR-2018**

Department of Computer Science and Engineering  
Motilal Nehru National Institute of Technology Allahabad  
Allahabad-211004

**E-mail:** [damlr@mnnit.ac.in](mailto:damlr@mnnit.ac.in)

For any further information / assistance you may contact following student co-ordinators:

Mr. Vijay Kumar Dwivedi - 09235668045

Mr. Abdul Aleem - 08800218068

Mrs. Jagriti Singh - [singh.jagriti5@gmail.com](mailto:singh.jagriti5@gmail.com)

Ms. Garima Singh - [singhgarima4688@gmail.com](mailto:singhgarima4688@gmail.com)

## INTRODUCTION

R is an open-source, powerful language for data analytics and statistical computing. R facilitates user to extend the built-in statistical procedures for implementation of new statistical methodologies. R is the most used tool for machine learning techniques. The workshop is planned to illustrate employment of various statistical and machine learning techniques using R.

## OBJECTIVES AND PREAMBLE

The objectives of the workshop are:

- To strengthen knowledge of faculty members, research scholars and students in the field of Machine Learning.
- To learn R and its use in Statistical and Machine Learning applications.

The program will first take up the basics of Statistics, Linear Algebra, Machine Learning and R followed by advanced Machine Learning Techniques in detail with their implementation.

## TOPIC TO BE COVERED

The course will contain following topics:

- Introduction to R and R set-up
- Basic Statistics, Probability Distribution and Linear Algebra
- Linear and Logistic Regression
- Supervised Classification {Naïve Bayes, Decision Trees, Random Forest and SVM}
- Introduction to Machine Learning
- Machine Learning using Neural Network
- Genetic Algorithms with R
- Basic Collaborative Recommender System

## COURSE OUTCOME

After completion of this workshop, participants would be well familiar with R tool and would be able to use with confidence statistical and machine learning related features of R.

## COURSE DURATION

**One Week (28<sup>th</sup> May to 1<sup>st</sup> June 2018)**

## WHO SHOULD ATTEND

The primary audience would be faculty members and Ph.D. students of educational institutions. It is also open for PG students and industry personnel.

## IMPORTANT DATES

**Last Date for Receipt of Application Form: 21<sup>st</sup> May, 2018**

**Selection Notification by 23<sup>rd</sup> May, 2018**

**Course Commences on 28<sup>th</sup> May, 2018**

## RESOURCE PERSON

Faculty members from IITs, NITs, and other reputed institutes.

## REGISTRATION

To register for this course the applicants will have to pay non-refundable fees in advance as per the following details

Category	Fees (Rs.)
Faculty / Industry Personnel	5000/-
Research Scholars/ PG Students	3000/-
MNNIT Students	2000/-

Registration fee can be submitted through NEFT, A/C Name: DAMLR 2018, A/C Number: 718400301000309, Vijaya Bank, Branch: MNNIT Allahabad, IFSC: VIJB0007184 OR via D.D in favour of "DAMLR-2018" payable at Allahabad.

The lodging and boarding arrangements for candidates from outside Allahabad can be made on request for limited number of accommodations. The charges of lodging and boarding are separate from the registration fee.

The candidates can register online through the web-link provided on the official website of MNNIT Allahabad ([www.mnnit.ac.in](http://www.mnnit.ac.in)). Alternatively, registration form available with this pamphlet can be downloaded from the provided web-link and posted to co-ordinators DAMLR-2018 after duly filling the form. Completed registration form along with the D.D. and payment details should reach at the communication address by post or E-mail (in case of NEFT payment with transaction details) on or before 21<sup>st</sup> May, 2018. The applicants will be intimated by E-mail on or before 23<sup>rd</sup> May, 2018.

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### **REGISTRATION FORM**

**(Please use this form only in case of problem with online registration)**

Name (in Block Letters) \_\_\_\_\_

Date of Birth \_\_\_\_\_ Sex: Male/Female

Highest Qualification: \_\_\_\_\_

Organization: \_\_\_\_\_

Designation (Faculty / Research Scholar / PG Student /  
Industry Personnel)

Experience: \_\_\_\_ Years \_\_\_\_ Months

Address of Correspondence:

\_\_\_\_\_  
City: \_\_\_\_\_ Pincode: \_\_\_\_\_

Mobile No. \_\_\_\_\_

E-mail \_\_\_\_\_

Accommodation needed Yes/No

**PAYMENT DETAILS:**

Draft No. \_\_\_\_\_ Date: \_\_\_\_\_

Issuing Bank and Branch (with code) \_\_\_\_\_

(In favour of DAMLR-2018, payable at 'Allahabad')

For NEFT: Transaction ID \_\_\_\_\_ Amount \_\_\_\_\_ Date: \_\_\_\_\_

(Signature of Applicant)