राष्ट्रीय इलेक्ट्रॉनिकी एवं सूचना प्रौद्योगिकी संस्थान, चेन्नई
NIELIT National Institute of Electronics & Information Technology, Chennai

Ministry of Electronics & Information Technology
Government of India

नेशनल इंस्टीट्यूट ऑफ इलेक्ट्रॉनिक्स एंड इंफॉर्मेशन टेक्नोलॉजी, चेन्नई

National Institute of Electronics and Information Technology, Chennai

Autonomous Scientific Society of Ministry of Electronics & Information Technology (MeitY), Govt. of India

ISTE Complex, 25, Gandhi Mandapam Road, Chennai - 600025

Course Prospectus

Certificate Course in Advance Data Analytics and Machine Learning using R

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Course Prospectus

Name of the Group	:	Data Science
Course Name	:	Online Certificate Course in Advance Data Analytics and Machine Learning using R
Duration	:	4 weeks - 40 Hours (02:00 Hours per Day)
Course Coordinator	:	Dr. Sanjeev Kumar Jha, Mobile: 7765803105
Start Date	:	24 - 02 – 2021 (Time : 1:00 PM – 3:00 PM)
Last Date of Registration	:	21 - 02 - 2021

Objective of the Course:

The **Online Certificate Course in Advance Data Analytics using R,** 40 Hours program offered by NIELIT Chennai is an excellent blend of knowledge and practice in the field of Data Science and its industrial applications. The course progresses from the scratch about R to a pro-level for achieving the goal of solving critical business and Analytic problems. The Program also offers real – life analytical projects for participants to get equipped with strong analytical and programming which makes them highly demanding and employable on completion of the program. The course has been designed after proper industry survey and consultation with multiple industry leaders to ensure that participants learn exactly what employers need.

The objective of this program is to make Statistical Analysts. The MCKINSEY Global Institute has predicted that in forthcoming years, the world will face a shortage of more than 38-40 million highly skilled manpower with deep analytical skills that can leverage data analysis to make effective decisions for their organizations. So, it is quite obvious that existing resources along with new candidates who are interested in perusing career in this field needs to be trained. Our objective is to create a pool of talent who can meet this demand. This course is meant to sensitize students for computational statistics applications and usage as well as provide hands-on experience with solving real world data science issues.

Outcome of the Course: On completion of this Course, the Participants will learn the concept of Data Analytics using an open source statistical tools called R. They will be able to implement industry-oriented Data Analytics Project.

Requirements

- ✓ You will need access to a PC/Laptop with an Internet connection.

- ✓ You must have at least 8GB of free RAM on your system.

- ✓ A basic familiarity with the Linux command line will be very helpful.

Course Structure

S.no	Topic	Duration (in weeks) via Online mode
1	Module 1: Introduction to Data Analytics and Basics of R	1 week
2	Module 2: Statistical Distributions	1/2 week
3	Module 3: Testing of Hypothesis	1 week
4	Module 4: Goodness of Fit test	1/2 week
5	Module 5: Machine Learning using R	1 week
	Total	4 weeks

Other Details:

Course Fees: Rs. 1,500/- (Including GST) (Non-Refundable)

However, the above Training fee shall be refunded on few special cases as given below:

1. If course postponed and new date is not convenient for the student.

2. If course cancelled

Payment Schedule
The Fee has to be paid in one instalment as given below.

Installment No	Last Date of Payment	Amount (in Rs.)
1	21-02-2021	Rs.1,500/-

Eligibility

✓ B.E./B.Tech/B.C.A./M.C.A./B.A/B.Sc/A-Level/Any Graduate having knowledge of Mathematics/Statistics/College going Students

How to Apply

Candidates can apply online in our website http://reg.nielitchennai.edu.in Payment be paid through any of the following modes:

✓ Online transaction: Account No: 31185720641 Branch: Kottur (Chennai), IFS Code: SBIN0001669.

Note: *The Institute will not be responsible for any mistakes done by either the bank concerned or by the depositor while remitting the amount into our account*

Last date of Registration: 21-02-2021

Selection Criteria of candidates

Selection is based on the first come basis (subject to fulfilling the eligibility criteria)

Admission Procedure

All interested candidates are required to fill online Registration form with the Course fees before 21-02-2021 with all the necessary following documents.

- Original and self-attested Copies of Proof of Age, Qualifying Degree (Consolidated Mark sheet & Degree Certificate/Course Completion Certificate), etc.
- One passport size photograph.
- Self-attested copy of Govt. issued photo ID card

Note: Working days are from Monday to Friday.

Discontinuing the course: No fees under any circumstances shall be refunded in case of a student discontinuing the course. No certificate shall be issued if discontinued.

Course Timings: 2 hours online daily (from Monday to Friday) during working hours

Mode of Training: Online Instructor Led

Course Contents:

Module 1: Introduction to Data Analytics and Basics of R

Basic Concept of Data Analytics & Data Manipulation in R

Learning Objective: In this section candidate will learn the concept of Data Analysis and R. After completion of the section participants will be skilled with data manipulation techniques.

Topics: Data Analysis, process of data analysis, Basic Features of R, Installation R Studio and method of accessing through URL, Basic Data Sets: Vector, Matrices, List, Array, Factors, Data Frames, Data Types, Operators, Basic Constructs, R Functions, String Handling, R Packages, Data Reshaping, Data Pipelines, Data Manipulation

Data Mining using R

Topics:

Introduction: Basic Concepts of Data Mining with R.

Data Import and Export: Save and Load R Data, import from and Export to .csv Files, Output to and Input from EXCEL Files

Data Exploration: Explore Individual Variables, Explore Multiple Variables, More Explorations, Save Charts into Files

Module 2: Statistical Distribution using R

Topics: Random Variable, Distribution Functions (Discrete and Continuous), Measure of Central Tendency, Deviations, Proportions, Covariance, Correlation, Interval Estimation

Module 3: Testing of Hypothesis and Goodness of Fit Test using R

Topics: Null and Alternative Hypothesis, Critical and Acceptance Region, P Value, Type I and Type II error, Testing Mean, Chi Squared Test of Independence

Module 4: Goodness of Fit Tests.

Module 5: Machine Learning using R

Linear Regression, Classification, Clustering

Address:

National of Electronics and Information Technology

ISTE Complex, No. 25, Gandhi Mandapam Road, Chennai – 600025

E-mail: trng.chennai@nielit.gov.in/Phone: 044-24421445

Contact Person: (1) Lakshmi Priya S, Mobile: 7401474694

(2) Dr. Sanjeev Kumar Jha, Mobile: 7765803105

Course enquiries

Students can enquire about the various courses either on telephone or by personal contact between 9.15 A.M. to 5.15 P.M. (Lunch time 1.00 pm to 1.30 pm) Monday to Friday.