INDIAN STATISTICAL INSTITUTE
announces
Online Course on
Machine Learning using Python and R

08 June 2024 – 27 July 2024
SQC & OR Unit, Bangalore

Organized by:

SQC & OR Unit, Indian Statistical Institute, Bangalore - 560 059, INDIA

Phone : +91-80-2698 5402   Mobile: +91 94487 04182 / 74833 24535   Fax : +91-80-2848 4910

Web : http://www.isibang.ac.in
e - mail : boby@isibang.ac.in & sqc_course@isibang.ac.in

Objective

This program is designed to equip professionals with the capabilities in extracting implicit, previously unknown and potentially useful knowledge from large datasets

Benefits

The participants will acquire the knowledge required for

- Extracting insights through descriptive analytics
- Pre-processing the data for analytics and anomaly detection
- Exploring relationship between features using data visualization
- A/B testing using test of hypothesis and analysis of variance
- RFM (Recency, Frequency and monetary Value) analysis and customer segmentation
- Developing recommendation systems
- Supervised learning using statistical and machine learning techniques
- Generating actionable insights using unsupervised learning techniques
- Hands on experience on the usage of Python and R packages

Eligibility

- Any science, commerce, economics, management or engineering graduate can participate in the program
- Online examination will be conducted at the end of the course. Successful candidates will be issued the certificate

Course Content

Module	Topic
Module 1	Introduction to machine learning & analytics, introduction to Python and R, descriptive analytics and its applications
Module 2	Exploring relationship between features using scatter plot, correlation, box plot, interval plot, data aggregation, conditional density plot, cross tabulation & mosaic plot
Module 3	Data sorting, filtering, merging, mutation, appending, missing value handling, identification of zeros, duplicates & unique records.
Module 4	Anomaly detection, A/B testing, RFM analysis, customer segmentation and development of recommendation systems
Module 5	Unsupervised learning techniques: Factor analysis, cluster analysis and market basket analysis
Module 6	Supervised learning techniques: Regression analysis, classification and regression tree, bagging, random forest, support vector machines
Module 7	Case studies on predictive maintenance analytics, HR analytics, supply chain analytics, applications of supervised learning in reliability, banking & finance and telecom domains

The course material and data set will be shared with the participants. Training will be conducted online on Saturdays & Sundays

Course Fee

INR 20,000/- per participant (+18 % tax) (inclusive of course material).

Seats are limited. Enrolment on a First-Come-First-Serve basis. Admission will be closed once the seats are filled. Before making an online course fee payment, kindly check the availability of seats.

Fee	GST	Total Amount
Rs. 20000/-	Rs. 3600/-	Rs. 23600/-

Application Form

https://forms.gle/jBBqmEvWe1vc5gSm9

Note: Kindly mention the participant and course (ML-06) names in remark/message field while doing online transfer of course fee

Important Dates

Last date for submission of nominations: 06 June 2024

Course dates: 08 – 09, 22 – 23 June 2024 & 06 – 07, 20 – 21 & 27 July 2024

Duration: 9 days

Timing: 9:30 am – 5:30 pm

Online Fund Transfer Details

Bank Account Details	
Name	Indian Statistical Institute
Bank	Uco Bank, Kengeri Branch
Account Number	02970200000702
IFSC Code	UCBA0000297
Type of Account	Current Account

Contact: Program Director : ML-06,

SQC & OR Unit, Indian Statistical Institute,

8th Mile, Mysore Road, Bangalore –560059, INDIA

Fax: +91-80-2848 4910

Phone: + 91-80-2698 5402

Mobile: +91 94487 04182 / 74833 24535

email: boby@isibang.ac.in & sqc_course@isibang.ac.in

Indian Statistical Institute

1. Indian Statistical Institute is a unique institution devoted to the research, teaching and application of statistics, natural sciences and social sciences

2. It is declared by an Act of Parliament as an Institute of National Importance.

3. Over the years, the Institute has grown as a multi-disciplinary organization.

4. It functions as a university empowered to award degrees up to Ph.D.; as a corporation in undertaking large scale projects; as a firm of consultants to industries to improve quality, reliability & efficiency and as a meeting place of scientists, economists & literary figures from all parts of the world.

Role & Function of SQC & OR Division

1. The pioneer and leader in blending statistical theory with practice and institutionalizing the continuous improvement process into a sustainable system.

2. To strengthen the national economy through a continual search for excellence in quality.

3. To disseminate the basic concepts and techniques for Quality Improvement by organizing training programs, workshops and corporate training programs.

4. To develop highly skilled professionals capable of self-actualization.

5. To help industries in their efforts to cope up with the growing challenge of global competition through implementation of quality systems based on ISO-9000 series, ISO-14000, QS-9000 standards, Six Sigma & World Class Manufacturing.

6. To continually develop and improve methodologies through applied research efforts to attain international standards in services provided.