

Indian Institute of Technology Kharagpur
Vinod Gupta School of Management
Proposed Management Development Programme on
Data Analytics & Applied Machine Learning with R
for Officers of Indian Economic Service [3 Week Online Programme]
Location: Vinod Gupta School of Management (VGSOM), IIT Kharagpur

Proposed Schedule

Week 1	
<i>5th December (9AM-12PM)</i>	
Session 1	Introduction to Big Data Analytics
Session 2	Basic Data Handling with R Programing
<i>5th December (2PM-5PM)</i>	
Session 3	More Data Handling with R Programing
Session 4	Basic Statistics and Probability, Probability Distributions
<i>6th December (9AM-12PM)</i>	
Session 5	Hypothesis Testing – t test
Session 6	Hypothesis Testing – F test and ANOVA, Chi square test
Week 2	
<i>12th December (9AM-12PM)</i>	
Session 7	Linear Regression
Session 8	Logistic Regression
<i>12th December (2PM-5PM)</i>	
Session 9	Machine Learning Technique – Artificial Neural Network
Session 10	Machine Learning Technique – Decision Tree
<i>13th December (9AM-12PM)</i>	
Session 11	Machine Learning Technique – Naïve Bayes for Sentiment Analysis
Session 12	Cluster Analysis for Segmentation
Week 3	
<i>19th December (9AM-12PM)</i>	
Session 13	Data Visualization using Power BI
Session 14	Data Visualization using Power BI
<i>19th December (2PM-5PM)</i>	
Session 15	Forecasting Techniques
Session 16	Forecasting Techniques
<i>20th December (9AM-12PM)</i>	
Session 17	Prescriptive Analytics
Session 18	Prescriptive Analytics

Details

All sessions are of 90 Min duration.

2 Extra doubt clearing sessions (2 hour each) on 13th and 20th December from 3PM to 5PM

Total duration of the program = 30 hours

Sessions will be taken using MS Teams/Zoom and LMS

We will conduct 4 quizzes (MCQ) and 3 assignments (take home).

Resource Persons

Dr Swagato Chatterjee (B.Tech, IITKGP; FPM, IIM Bangalore)

Prof Swagato Chatterjee, an IIT-IIM alumni, has a rich client base for MDP and consultancy projects on analytics: Ministry of Finance, Ernst & Young, Yes Bank, CSC, Namura, Mitsubishi, Toyota, GE, Times of India, Coca-cola, NTPC, HPCL, Indian Oil, Philips, RPG Group etc. He brings in a mixture of industry experience and academic knowledge in the class to cater to audience of different seniority levels.

Dr Sujay Bhattacharya (PhD, IIITM, Gwalior)

Prof. Sujoy Bhattacharya's area of interest is business analytics. Prof. Bhattacharya is proficient in R and Python softwares. Prof. Bhattacharya can handle complex business analytics problems with varied applications.

Dr Parama Barai (MTech, IISc Bangalore; FPM, XLRI Jamshedpur)

Prof. Parama Barai has six years' teaching experience in finance related subjects, specifically in the areas of investment management, financial analytics, financial risk modeling, derivatives, capital budgeting, and corporate finance. Prof. Barai also conducts research in these areas.

Dr Saini Das (FPM, IIM Lucknow)

Prof Saini Das is an assistant professor in the area of business analytics and information systems. Before joining IIT Kharagpur, she has taught in IIM Indore as a faculty of information systems area. Her expertise is in cyber security, e-commerce and management information systems.

Program Co-ordinator

Principal coordinator: Dr Swagato Chatterjee