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 [1 Week Programme]
Location: Vinod Gupta School of Management (VGSOM), IIT Kharagpur
Suggested Dates:
Proposed Schedule

Day 1	
Session 1#	Introduction to Big Data Analytics
Session 2	Basic Data Handling with R Programing
Session 3	More Data Handling with R Programing
Session 4	Basic Statistics and Probability, Probability Distributions
Day 2	
Session 1	Hypothesis Testing – t test
Session 2	Hypothesis Testing – F test and ANOVA, Chi square test
Session 3	Linear Regression
Session 4	Project-1
Day 3	
Session 1	Logistic Regression
Session 2	Machine Learning Technique – Artificial Neural Network
Session 3	Machine Learning Technique – Decision Tree
Session 4	Project - 2
Day 4	
Session 1	Machine Learning Technique – Naïve Bayes for Sentiment Analysis
Session 2	Dimension Reduction and Factor Analysis
Session 3	Cluster Analysis for Segmentation
Session 4	Project - 3
Day 5	
Session 1	Forecasting Techniques
Session 2	Forecasting Techniques
Session 3	Prescriptive Analytics
Session 4	Project - 4

All sessions are of 90 Min duration.

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 Kunal Kanti Ghosh (MTech, IIT Kanpur, PhD, IIT Kharagpur)

Prof. Kunal Ghosh has 30 years of experience in Tata Motors in the area of Automotive Design, Production, Quality, IT, Strategy Formulation & Execution. Prof. Ghosh's competence is in Supply Network Management and Business Analytics

Dr Parama Barai (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 Rudra Pradhan (PhD, IIT Kharagpur)

Prof. Rudra P Pradhan has more than a decade of teaching and research experience. His research interests include infrastructure finance, foreign direct investments and econometric modelling. Prof. Pradhan has published several research papers in various national and international referred journals.

Program Co-ordinator

Principal coordinator: Dr Swagato Chatterjee