



भारतीय प्रबंध संस्थान रोहतक

INDIAN INSTITUTE OF MANAGEMENT ROHTAK

मैनेजमेंट सिटी, दक्षिण बायपास, NH 10, सुनारिया, रोहतक, हरियाणा, भारत-124010
Management City, Southern Bye Pass, NH 10, Sunaria, Rohtak, Haryana, India-124010

Sub - Welcome to the Online Executive Education Programme in Business Analytics & Intelligence

Dear Participants,

Greetings from IIM Rohtak!

Indian Institute of Management Rohtak welcomes you to the 50-hour online 'Business Analytics & Intelligence 04'.

As scheduled, the programme will commence on 28 July 2024 and culminate on 01 December 2024.

The programme has been designed by the experienced and learned faculty of IIM Rohtak with an objective to enable business professionals to interpret a real-world data set and make informed decisions. The program aims to impart essential knowledge of several basic as well as advanced data analytics techniques to the participants by engaging them in hands-on case studies and scenarios in real business contexts.

We believe that this programme is going to take the participants through a unique learning experience in the coming weeks.

The Information brochure comprising programme objectives, day-wise session schedule and faculty profile is being shared with you.

We wish you a pleasant and fruitful interactive learning experience.

Best wishes,

IIM Rohtak



भारतीय प्रबंध संस्थान रोहतक Indian Institute of Management Rohtak

Online Executive Education Programme in Business Analytics & Intelligence

Executive Education

Programme Coordinator

Prof. Dheeraj P Sharma

Faculty Incharge(s)

Prof. Praveen Ranjan Srivastava

Prof. Harshit K Singh

Course Objective

The increasingly volatile, uncertain, complex and ambiguous business environments demand businesses to make effective decisions. Despite being able to generate and store large volumes of data, businesses often find it difficult to glean important insights from it. However, a new genre of approaches, referred to as data analytics, has evolved as a potent approach to process and manage large volumes of data, and deliver business value and corporate results quickly. It is believed that managers skilled in data analytics will be able to steer the next wave of management innovation, productivity, and growth. This course envisages to equip managers with basic, as well as, advanced data analytics techniques for handling and analyzing business data to enable informed and fact-based managerial decision-making.

Pedagogy

A combination of cases, exercises, lectures, and hands-on practice using analytics tools will be used.

Detailed Day-wise Session Schedule for e-MDP on Business Analytics & Intelligence (BAI) - 4 28th July 2024 - 1st December 2024
Time: 07.15 PM-08.30PM-08.50PM-10.05PM.

Session Topics	Session No.	Coverage of Topics	Faculty	Case/Reading
Day 1. 28th Jul 2024 (Sunday)				
Introduction to Business Analytics & Machine Learning	1-2	Knowledge Discovery Process and life cycle	Prof Abhishek Verma	Case: Research challenges and opportunities in business analytics
Day 2. 4th Aug 2024 (Sunday)				
Data warehouse and Analysis	3-4	Introduction and need for data warehouse. Star and snowflake schema ETL, OLTP/OLAP	Prof Praveen Ranjan Srivastava	Case-let: OLAP on ESPN data
Day 3. 10th Aug 2024 (Saturday)				
Exploratory Data Analysis	5-6	Analyzing Data through GUI and Extracting Knowledge for further process	Mr. R VivekAnand (IE)	
Day 4. 11th Aug 2024 (Sunday)				
Building Dashboard	7-8	Dashboard management	Prof Sanket Sunand Dash	
Day 5. 18th Aug 2024 (Sunday)				
Tools for Business Analytics	9-10	Introduction to R (part 1)	Prof Promod Mane	Dataset: HW Problem
Day 6. 25th Aug 2024 (Sunday)				
Tools for Business Analytics	11-12	Introduction to R (part 2)	Prof Promod Mane	Dataset: HW Problem
Day 7. 1st Sep 2024 (Sunday)				
Application of Data and business Analytics	13-14	Human morale optimization	Prof Praveen Ranjan Srivastava	Case let: The 'Human morale' Optimization Problem: The Case of MicraFinance Ltd.
Day 8. 8th Sep 2024 (Sunday)				
Tools for Business Analytics	15-16	Introduction to Python	Prof Promod Mane	Exercise on Jupyter Notebook of Anaconda IDE
Day 9. 14th Sep 2024 (Saturday)				
Analytical Techniques for Business Intelligence - I	17-18	Classification Models Various Theories like kappa, accuracy etc. using, under the classification	Prof Abhishek Verma	
Day 10. 15th Sep 2024 (Sunday)				
Analytical Techniques for Business Intelligence - II	19-20	Ensemble Learning Techniques and its Application	Prof Praveen Ranjan Srivastava	Case let Grouping of flower & Bank loan
Day 11. 22nd Sep 2024 (Sunday)				
Analytical Techniques for Business Intelligence - III	21-22	Web and Social Media Analytics	Prof Ankit Kesharwani	Case: MedNet.com Confronts 'Click-Through' Competition (HBSP)
Day 12. 29th Sep 2024 (Sunday)				
Analytical Techniques for Business Intelligence - IV	23-24	Clustering (ward method, Silhouette method, Gap statistic, Elbow method, Average, Single, Complete	Prof Abhishek Verma	Segmenting the organic food market in Lebanon: an application of k-means cluster analysis (Article) +

		Method etc.) All the methods discussed with business scenarios		Data will be shared before the session
Day 13. 6th Oct 2024 (Sunday)				
Analytical Techniques for Business Intelligence - V	25-26	Unsupervised Learning in Details, Lift Support, confidence	Prof Pramod Mane	Case let : Market basket data and store lay out design
Day 14. 20th Oct 2024 (Sunday)				
Analytical Techniques for Business Intelligence - VI	27-28	Association Rule Mining Apriori and Frequent Pattern tree	Prof Abhishek Yadav	
Day 15. 27th Oct 2024 (Sunday)				
Analytical Techniques for Business Intelligence - VII	29-30	• Text Analytics • Sentiment Analytics Image Analytics	Prof Ankit Kesharwani	Anggraini, N., & Suroyo, H. (2019). Comparison of Sentiment Analysis against Digital Payment "T-cash and Go-pay" in Social Media Using Orange Data Mining. Journal of Information Systems and Informatics, 1(2), 152-163.
Day 16. 9th Nov 2024 (Saturday)				
Analytical Techniques for Business Intelligence - VIII	31-32	Recommendation System and Analysis (unsupervised Learning)	Prof Ankit Kesharwani	Marchand, A., & Marx, P. (2020). Automated product recommendations with preference-based explanations. Journal of retailing, 96(3), 328- 343.
Day 17. 10th Nov 2024 (Sunday)				
Application of Business Analytics: Marketing Analytics	33-34	Customer Value	Prof Abhishek Yadav	
Day 18. 17th Nov 2024 (Sunday)				
Application of Business Analytics: Sports Analytics	35-36	Analysis based on Sports data (Cricket)	Mr. R VivekAnand (IE)	
Day 19. 24th Nov 2024 (Saturday)				
Big Data Analytics, Deep learning, Explainable AI (XAI) (introduction)	37-38	Concept discussion on emerging topics	Mr. Sharad B Nalawade (IE)	
Day 20. 1st Dec 2024 (Sunday)				
Project Presentations	39-40	Project Presentations	Prof Praveen Ranjan Srivastava/ Prof Harshit Kumar Singh	

Faculty Profiles



Prof. Praveen Ranjan Srivastava is a faculty in the Area of Information Technology Systems at IIM Rohtak. He did his Ph.D. in Computer Science & Engineering from Birla Institute of Technology & Science, Pilani. During Ph.D. tenure he got various fellowship and awards from leading organizations like Google, Microsoft etc. Prof. Srivastava received his Master of Technology (M.Tech) degree in Software Engineering from MotiLal Nehru National Institute of Technology, Allahabad. Before joining IIM Rohtak, he has served As a Faculty In the Department of computer science @ BITS Pilani, Pilani campus Rajasthan about 8 years. He is currently doing research in the area of Data analytics, E-commerce & software engineering using nature inspired techniques. His research areas are software testing management, Analytics and E commerce, Software Project Management, Quality assurance, Agile Modeling & Management etc. He has published research papers in various leading international journals and conferences in the area of Information System/Computer science and engineering. His H index is 15 and I index is 24. He has been actively involved in reviewing various research papers submitted in his field to different leading journals and various international and national level conferences. He conducts several MDPs also.



Prof. Harshit Kumar Singh holds a PhD from the Indian Institute of Management Ahmedabad in the area of Information Systems. Prior to joining his doctoral program, he has worked in the industry as a Software Developer. He had completed his Bachelor's in Computer Science & Engineering from the National Institute of Technology Patna. His Ph.D. thesis investigates the challenges of large-scale adoption of work-from-home on organizations. His research interest includes IS competencies, motivational information systems with a focus on gamification and digital engagement. His teaching interests include Management Information System (MIS), Managing Software and Project Enterprises, Gamification Technology and Business, Data Structure and Algorithms and Theories of Information System.



Prof. Sanket Sunand Dash is a faculty in the area of Organizational Behaviour & Human Resource Management (OB&HRM) at Indian Institute of Management Rohtak. He has completed Fellow Program in Management (FPM) from Indian Institute of Management Ahmedabad. He worked as a senior analyst with Deloitte US India for four years before joining the FPM program in IIM Ahmedabad. Before joining IIM Rohtak, he was a faculty at Xavier School of Human Resources (XAHR), Xavier University Bhubaneswar.



Prof. Abhishek Verma is working as an assistant professor in the area of Management Information Systems at IIM Rohtak. He completed his PhD from the Department of Industrial and Systems Engineering, Indian Institute of Technology Kharagpur. He received his Master of Technology (M. Tech) in Computer Science and Engineering from ABV-Indian Institute of Technology, Gwalior. Before joining IIM Rohtak, he has served as a faculty in GLA University, Mathura and VIT University, Bhopal campus. His work is published in many reputed international journals, conferences and book chapters. He is also a reviewer of many reputed journals and conferences.



Prof. Ankit Kesharwani is a faculty in the area of Marketing and Strategy. Prior to joining IIM Rohtak, he was associated with the Indian Institute of Foreign Trade (IIFT) Delhi Campus (2018-2021), and IBS Hyderabad (2014-2018). During his Ph.D., he was a visiting scholar at Fogelman College of Business and Economics, University of Memphis, USA (2011 -2012). He has about 8 years of post-Ph.D. experience in teaching MBA students, Executive MBA students, and Doctoral students. He has specializations in Digital Marketing, Marketing Analytics, Web and Social Media, Analytics, Business Research Methods, Marketing Research, Marketing Management, and Customer Relationship Management. He has taken training sessions for employees of various government and corporate organizations, including DGR, Tata Metaliks, Electronics Corporation of India Limited, Punjab National Bank, National Cooperative Dairy Federation of India Ltd, Engineers India Ltd, and Indian Energy Exchange Limited. He was also involved in various government projects like Sector-Specific Logistics Performance Index (LPI-S) 2020 by IIFT, Logistics Ease Across Different States (LEADS) 2021 report by Ernst & Young, and Khadi and Village Industries Commission (KVIC) 2021 project by IIFT.



Prof. Pramod Mane worked as an Assistant Professor and a Faculty, respectively, at the Indian Institute of Information Technology Dharwad and National Institute of Technology Raipur. He earned his PhD in Computer Science and Engineering from Indian Institute of Technology Indore. He holds an MTech in Information Technology from the National Institute of Technology, Durgapur. His area of interest is broadly at the intersection of Computer Science, Economics, and Social Science. His current research focuses on understanding the dynamics of strategic network formation in sharing economy.



Prof. Abhishek Yadav is a faculty in the Marketing and Strategy area at IIM Rohtak. He holds Ph.D. in Marketing from Indian Institute of Management Kashipur and a masters in business administration (MBA) degree with specialization in International Business from the Delhi School of Economics, University of Delhi. His research primarily focuses on consumer-brand relationships, consumer emotions, consumer behavior and gamification. He has published papers in ABDC and Scopus-listed journals and books. He has also presented his research at several international marketing conferences in multiple countries.