Rajeev Institute of Technology, Hassan

Department of Management Studies

Online Workshop on

HR Analytics

by

Swastik Consultancy Bangalore

Date: 26-08-2021 to 31-08-2021

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About the Certification Program

The traditional function of human resource management has gone through a wave of metamorphosis in terms of its function and application in the wake of recent shift towards evidence-based management and data analytics. HR has been supported in this exciting journey through the user-friendly software packages, ranging from the more commonly known ones such as MS Excel to the more advanced ones such as R, PYTHON, SAS, SPSS, RapidMiner and others have lent a good hand in crunching the data and finding interesting inter-relationships hidden in the data.

This short-duration certification program focuses on orienting HR professionals in "HR/PeopleAnalytics", with an aim to provide a hands-on experience in some of the key HR analytics application areas such as predicting which candidates may accept or reject joining offer, understanding which training and development method is better in terms of employee output, identifying the star employees and attrition/talent retention analysis, to name a few. Participants would learn how to make HR related data clean and fit for subsequent use, how to visualize the data using one of the most popular tools - Power BI, and how to use predictive analytics and prescriptive analytics tools such as R and Python to drive data-driven insights to aid in their decision-making.

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KEY PROGRAM DIFFERENTIATORS:

\# All modules will be covered using open-source GUI software applications having relevance for present industry demand. Prior coding knowledge is not essential to takepart in this certification and no additional monetary investment is required to access the tools.

\# Specific sessions will be dedicated to understand and diagnose issues faced by participants at their own organizations and pertinent road maps will be prepared

\# Experiential learning-based pedagogy where participants will learn by doing in eachmodule. Real world and practice datasets will be shared by the program resource experts.

\# Capstone project at the end of the training sessions to help participants immerse their learning into real world problems so that the learning gets translated into applications

\# Continued association with the program resource experts beyond the scope of the program to accomplish firm specific analytics objectives.

Participant Profile:

The program is primarily curated for the HR professionals at entry level to middle level withkeen interest in HR analytics.

Pedagogy:

The program will follow a mix of demonstration, case studies and practice/project

methods.**Learning Objectives:**

- Understand applications of HR analytics in different HR functions, developing an analyticsculture and how to initiate a analytics project pipeline

- Learning to compute key HR metrics and linking them to key HR decisions

- Demonstrate data visualization skills with Power BI

- Demonstrate applied skills in using statistical techniques for problems such as employee engagement, compensation and benefit impact, diversity policy impact on bottom line

- Demonstrate applied skills in using machine learning techniques to apply on areas such aspredicting future attrition, joining propensity of candidates, promotion and performanceappraisal

Understanding applications of Text Analytics in context of employee sentiment mining, social media analytics and resume recommendation

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Program Coverage:

Day 1: Module 1

Session 1-4: Introduction to HR / People Analytics and celebrated use cases

Tracing the origin and journey of analytics skills in HR Domain; looking back at pioneering works of Thomas Davenport, Jac Fitz-enz and Josh Bersin and discussing major application areas such astalent analytics, L&D analytics, Diversity & Inclusion Analytics, Engagement Analytics, Performance Analytics and Comp-ben Analytics to name a few.

Specific content covered under module 1:

Session 1: History and evolution of Analytics in HR - discussion driven through practicalexamples, use cases from industry and real-world experience of Experts

Session 2: How to create a data driven culture and how to develop an analytics process pipeline -LAMP Framework and other strategic blueprints

Session 3: Discussion with participants about their own critical pain points and ideate possibleway forward, how to get started, what challenges are typically faced

Session 4: Orientation towards measuring HR variables - metrics and measurement issues -Developing a comprehensive standardization for measuring HR Data

Day 2: Module 2

Session 5-8: Applications of Microsoft Power BI in HR data visualization

To understand the applications of one of the fastest adopted BI tool - Power BI's features in data visualization and dashboarding. Applications such as how to create dynamic dashboards and storyboards showing HR process flow from multiple channels for depicting trends and patterns hidden within HR data across multiple organizational factors will be shown in hands-on manner

Specific content covered in Module 2:

Session 5: An orientation towards design

thinking

Session 6: Hands-on exposure to Microsoft Power BI - A data visualization and BI Tool

Session 7: Understanding and applying advanced aspects of power BI - custom visuals, AIpowered visuals

Session 8: How to connect to multiple data sets, transforming existing data, appending andmerging data, connecting to data from websites, SQL Database and through Power BI service

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Day 3: Module 3

Session 9-12: Predictive Analytics - How to glean data driven insights from HR Data

To help participants apply multivariate statistical techniques in HR applications such as analyzingimpact of employee compensation components on work related outcomes such as productivity,understand how organizational factors (leadership, culture, structure etc.) are related withemployee perception about their employer (employee satisfaction, commitment, OCB etc.), finding predictors of employee engagement and its consequences, understanding whether training was effective or not. All this will be shown through real world datasets and through MSExcel and R Software (but with no coding involved)

Specific content to be covered in Module 3:

Session 9: A brief orientation towards types of variables, basic statistical concepts such ascovariance, sampling etc.

Session 10: Hands-on exposure to two very essential statistical concepts to aid in data analytics - Correlation and Regression analysis - applications for compensation benchmarking, employeesatisfaction and engagement analytics

Session 11: Exposure to A/B Testing - Independent paired t test and its application in L & DAnalytics

Session 12: Hands-on exposure to Analysis of Variance (ANOVA) - for more complex application sin L & D Analytics, performance comparison across business units etc.

Day 4: Module 4

Session 13-16: Data Mining - leveraging machine learning for HR Analytics applications

To understand fundamental concepts of supervised machine learning in a ready-to-apply format. The focus will be on making participants capable of reaching a stage of applying theconcepts in practical scenarios. All concepts will be practically demonstrated with customized datasets addressing major HR pain points such as predicting employee attrition, predicting which candidates are more likely to join if offer letter is extended, how to make performance appraisal bias-free and how to create resume recommendation systems through text mining.Also, how to mine unstructured employee survey data to understand the generic mood of theemployees regarding certain HR policies or changes such as D&I initiatives through sentimentmining.

Specific   content   to   be   covered   in   Module   4:

Session 13: A brief introduction to machine learning - its application in predictive

analytics **Session 14:** Hands-on exercise on attrition prediction with Orange, a GUI

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environment in Python

Session 15: Fundamentals of text analytics - sentiment and emotion detection, tweet analysis

Session 16: Hands-on application of Employee survey data analysis for career pipeline development

Software requirements:

The participant needs to have access to the following software tools for hands-on exercises:

- MS Excel

- R 4.0.4 or higher version (download link - https://cran.r-project.org/bin/windows/base/)

- Power BI Desktop / Power BI Service* (download link: https://powerbi.microsoft.com/en-us/downloads/)

- https://orangedatamining.com/download/#windows)

All the above-mentioned software packages are free for download and use with genuineWindows and MS Office setup. Resource experts will guide participants on troubleshooting aspects during the installation of these software packages.

*For Microsoft Power BI, participants are requested to access the sign in option by consultingwith their Internal IT experts.

Note: All sessions will be conducted in a virtual mode through online collaboration platform.Links for sessions will be shared with participants on completion of registration.

Resource trainers will provide datasets pertaining to specific topics during in-class exercises. A mixture of real world and dummy datasets will be provided for this purpose.

Capstone Project:

All participants will be assigned to work on a distinct capstone project at the end of completion ofthe designated sessions. Participants may choose to work individually or in groups. For groupassignments, the group marks will be applicable to all group members.

The projects need to be submitted in soft copy along with all the analysis and supportingdocuments to the suggested mail ID. Based on their performance, participants will be awarded different grades ranging from 'High Distinction' to 'Satisfactory'.

If any participant fails to submit the project, they will only receive certificate of participation. Candidates will have liberty to either choose their own organizations and work with corporate data or focus on some simulated problem in case of data confidentiality issue.

Simulated problems and datasets will be shared by the program director on receipt of such requests

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REPORT

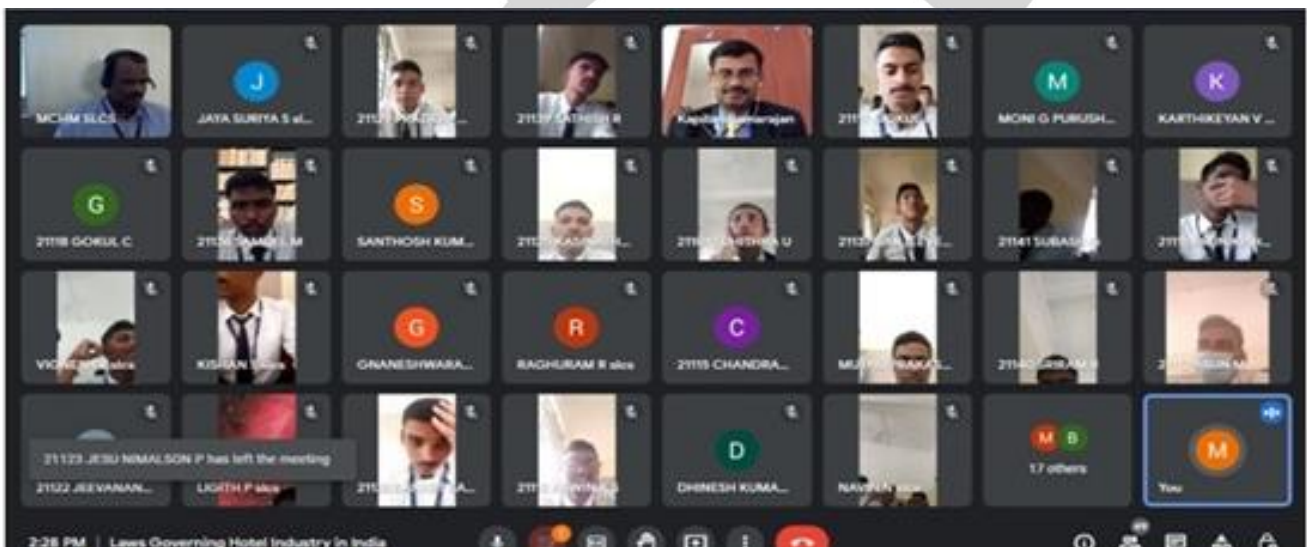|	
Activity Name	Online workshop on HR Analytics
Title	Online Workshop on HR Analytics
Objective	• Understand applications of HR analytics in different HR functions, developing an analytics culture and how to initiate a analytics project pipeline
	• Learning to compute key HR metrics and linking them to key HR decisions
	• Demonstrate data visualization skills with Power BI
	• Demonstrate applied skills in using statistical techniques for problems such as employee engagement, compensation and benefit impact, diversity policy impact on bottom line
	• Demonstrate applied skills in using machine learning techniques to apply on areas such as predicting future attrition, joining propensity of candidates, promotion and performance appraisal
	• Understanding applications of Text Analytics in context of employee sentiment mining, social media analytics and resume recommendation
Date of Activity	26th to 31st August 2021
Mode of Conduct	Online (Zoom)
Duration	6 Days
Trainers	Swastik Consultancy Bangalore
Mandatory/Elective	Mandatory
Participants	Students of 2020 – 2022 batch

Description:
Organized 24 hours of Online Workshop on Applications of Microsoft Power BI in HR data visualization, Predictive Analytics, Data Mining - leveraging machine learning for HR Analytics applications, AB testing in HR Analytics. This course is mandatory for people who deal with Data in a big or small way irrespective of the profession/business they take up. Especially, people who heavily chum out data for insights can achieve greater

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productivity levels using Advanced technologies.

Duration:

4 hours a day (5pm-9pm) for 6 days.

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Outcome of the training:

At the end of the training, students will be enable to,

1. Develop a comprehensive understanding of HR analytics applications across various HR functions, fostering an analytics-driven culture within the organization. Students will be equipped to initiate and manage an analytics project pipeline effectively.
2. Gain proficiency in computing key HR metrics and interpreting their significance in driving key HR decisions. Students will learn to correlate these metrics with organizational goals and strategies.
3. Acquire proficiency in data visualization using Power BI, enabling students to create compelling visual representations of HR data for effective communication and decision-making.
4. Apply statistical techniques to analyze HR data related to employee engagement, compensation, benefits, and diversity policies, identifying patterns and insights to inform strategic HR decisions and improve organizational outcomes.
5. Develop practical skills in applying machine learning techniques to predict future attrition rates, assess candidates' joining propensity, and optimize promotion and performance appraisal processes, thereby enhancing HR efficiency and effectiveness.
6. Explore the applications of text analytics in various HR contexts, including employee sentiment mining, social media analytics, and resume recommendation systems. Students will learn to extract valuable insights from unstructured data sources to support HR decision-making and strategy development.

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Trainers Details

Dr. Pratyush Banerjee

Dr. Pratyush Banerjee is an Assistant Professor (Human resource) in School of Human Resource Management, XIM University, Bhubaneswar, India. Earlier he was associated with the Department of HRM, OB and Communications at T. A. Pai Management Institute (TAPMI), Manipal. He holds a Ph.D. in Organizational Behavior and Human Resource Management.

Dr. Banerjee is a certied Business Analytics Professional from Carlton Advanced Management Institute (UK) and a Certied HR Analytics Professional from Aon-Hewitt. He has developed and delivered postgraduate and executive management courses on HR Analytics at IBS Hyderabad and BITS Pilani before joining TAPMI. He has also co-authored an applicationoriented textbook on HR Analytics from Sage Publications in 2019 titled 'Practical Applications of HR Analytics- a step by step guide'. He specializes in code-agnostic data visualization and data mining techniques.

Dr. Banerjee has conducted several MDPs on HR / Business analytics for corporate entities such as IOCL, HPCL and Poclain Hydraulics in recent times. He has also been a guest faculty at CII's certications program on People Analytics and at IIM Amritsar's executive education program on Data Analytics. He has also taught PGP students at IIM Raipur, IIM Indore and IIM Sambalpur as a guest faculty and has developed HRAnalytics curriculum at IIM Indore and at IIM Sambalpur

Dr. Lalatendu K. Jena

Dr. Jena is an Assistant Professor (Human resource) in School of Human Resource Management, XIM University, Bhubaneswar, India. He has more than 19 years of experience in both academics and corporate HR (with Hindustan Aeronautics Limited, Indian Defence PSU), including seven years as Faculty Member in HR at ICFAI University, Hyderabad, India and Central University of Orissa, India.

Dr. Jena specializes in the areas of human resource planning, performance management, learning and development, and talent assessment. His research interest lies in areas such as HRM and Sustainable Development Goals ; Self-steering, self-Organizing Teams and Leadership ; Job Crafting; Job Insecurity ; Millennial's and work ethics ; Return on Investment in HR Programs ; Sustainable HR through Disruptive Leadership ; Attitude and Productivity ; Joy at Work ; Workplace Persuasion ; Employee Retention and Leadership Challenges ; Abusive Supervision ; Performance in Multi-tasking Environment ; Stress and Coping ; Engagement and he has published papers in tiered national and international journals.

Dr. Jena has completed his Ph.D. from IIT Kharagpur, India (#=314 in QS Global World University Rankings 2021) on the topic "Workplace Spirituality and Human Resource Eectiveness" and did his Post Doc. on "Employee Retention and Leadership Challenges" at Loyola Leadership School, Universidad Loyola, Seville, Spain (ranked #581-590 in QS Global World University Rankings 2021).

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Contents Delivered

Date	Topics	Trainer
26/08/2021	**:** Introduction to HR / People Analytics and celebrated use cases	Dr. Pratyush Banerjee
27/08/2021	• Applications of Microsoft Power BI in HRdata visualization • An orientation towards design thinking • Hands-on exposure to Microsoft Power BI- A data visualization and BITool • Understanding and applying advanced aspects of power BI - custom visuals, AI powered visuals	Dr. Pratyush Banerjee
28/08/2021	• How to connect to multiple data sets, transforming existing data, appending and merging data, connecting to data from websites, SQLDatabase and through Power BIservice • Predictive Analytics - How to glean data driven insights from HRData	Dr. Pratyush Banerjee
29/08/2021	• Exposure to A/B Testing - Independent paired t test and its application in L & D Analytics • Hands-on exposure to Analysis of Variance (ANOVA)	Dr. Lalatendu K. Jena
30/08/2021	Data Mining - leveraging machine learning for HRAnalytics applications	Dr. Lalatendu K. Jena
31/08/2021	Hands-on exercise on attrition prediction with Orange, a GUI environment in Python	Dr. Lalatendu K. Jena

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Feedback of "Online workshop on HR Analytics"

nayak.muralidar@gmail.com Switch accounts

* Indicates required question

Email *

Your email address

Student Name *

Your answer

USN *

Your answer

E-mail ID *

Your answer

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Overall rating of Trainer *

1	2	3	4	5
○	○	○	○	○

Contents the Training *

1	2	3	4	5
○	○	○	○	○

Will this training helps to your career? *

○ Yes

○ No

○ Maybe

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Content of the training

■ Excellent	
■ Good	
■ Average	
■ Poor	
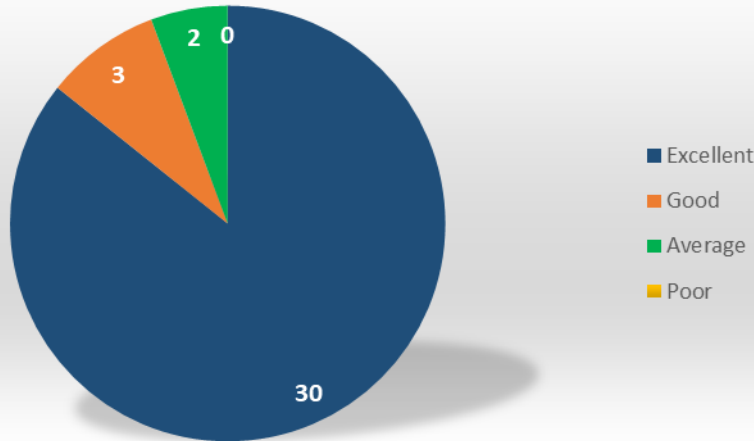
Overall Rating of the trainer

	5	4	3	2	1
Series1	28	3	3	1	0

Career Reliability

	5	4	3	2	1
Series1	28	3	3	1	0

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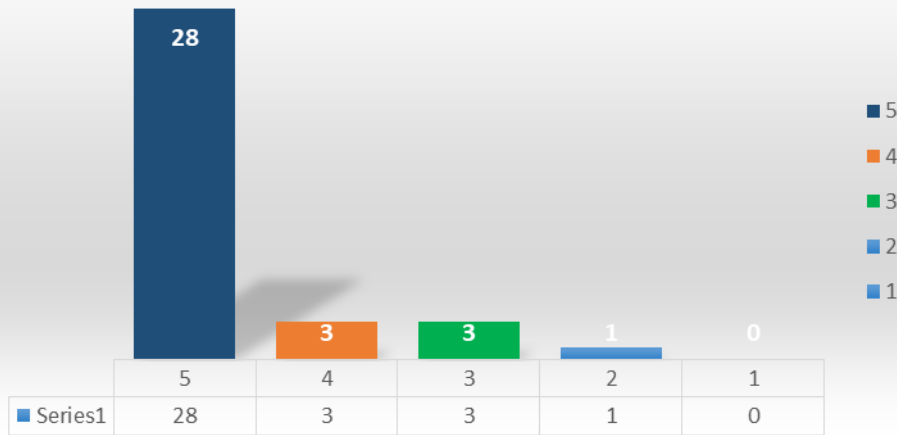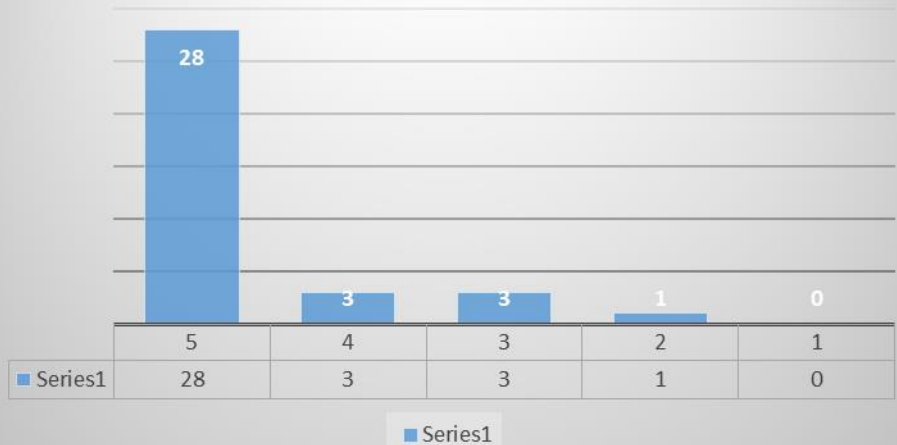
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STUDENTS LIST

USN	Student Name
4RA20BA001	Ahalya N
4RA20BA002	Akshatha J
4RA20BA003	Archana DM
4RA20BA004	Archana K H
4RA20BA005	Bhavana
4RA20BA006	Chaithanya M R
4RA20BA007	Chandana
4RA20BA008	Chirag AS
4RA20BA009	Darshan
4RA20BA010	Dileep Kumar H M
4RA20BA011	Fiza Muskan
4RA20BA012	Ghatke Saritha Limboji
4RA20BA013	Harshith J K
4RA20BA014	Indra Kumar H N
4RA20BA015	Jahnvi C N
4RA20BA016	Jeevan H M
4RA20BA017	Keerthana N S
4RA20BA018	Lavanya B V
4RA20BA019	Manasa BC
4RA20BA020	Meghana CM
4RA20BA021	Mohammed Faran
4RA20BA022	Nandish B B
4RA20BA023	Nisarga H M
4RA20BA024	Pragnya
4RA20BA025	Priyanka BM
4RA20BA026	Rakshitha D S
4RA20BA027	Roopashree C J
4RA20BA028	Rose Mary
4RA20BA029	Sachin H H
4RA20BA030	Smitha S
4RA20BA031	Sowmya B K
4RA20BA032	Swathi M
4RA20BA033	Varun Kumar H C
4RA20BA034	Vidya S H