

## PDP Report

### Report on 7-day virtual PDP on Decoding statistics for data analysis

<b>Date</b>	21 <sup>st</sup> - 28 <sup>th</sup> March 2022
<b>Time:</b>	05:00 PM - 07:00 PM (IST)
<b>Venue:</b>	Online
<b>Section:</b>	Not applicable
<b>Batch:</b>	Not applicable
<b>Semester:</b>	Not applicable
<b>Guest/Speaker Name:</b>	Dr. G S Vijaya, Dr. Chaya Bagrecha and Dr. Rupesh Sinha
<b>Guest/Speaker Designation</b>	Faculty members at CMS Business School
<b>Guest/Speaker Contact No &amp; Email Id:</b>	9902532047/9844733999/9844906169 dr.vijayags@cms.ac.in/dr.chayabagrecha@cms.ac.in/rupesh.sinha@cms.ac.in
<b>Guest/Speaker Company/ Institute Name:</b>	CMS BS
<b>Faculty Coordinators Name:</b>	Dr. Madhavi R, Dr. Chaya Bagrecha, Dr. V Y John
<b>Topic:</b>	7-day virtual PDP on Decoding statistics for data analysis
<b>Moderator (if any)</b>	None
<b>No. of Attendees</b>	35
<b>Feedback:</b>	
<b>Brochure: (if any)</b>	Attached at the end
<b>Revenue Collected: (if any)</b>	28500

## PDP Report

### 1. Introduction:

This *Professional Development Program (PDP)* on ‘**Decoding Statistics for Data analysis**’ uncovered such knowledge to serve the learning interests of diverse stakeholders such as academicians, PG students, research scholars, aspiring data scientists, students pursuing data sciences and business analytics, etc. The need to understand statistics as the core fabric of data driven decisions has over taken every aspect of business today with an intent to move from experience-based projections to evidence based predictions. This offers high relevance to the decisions at operational and strategic level. The myriad uses of data and data analysis award the unique value of making statistics a discipline neutral subject acting as a guiding lamp to offer insights to knowledge seekers from any discipline.

This *Professional Development Program* focused on allowing participants to learn statistical concepts from the basic to intermediate level to better understand the usage of statistical software packages and interpretation of output.

### 2. Venue (Outside/Inside the campus): Zoom Platform

### 3. Program Objectives:

- To uncover the basic tenets of statistics that aid data analysis
- To explore descriptive and inferential statistics without the use of a statistical software

### 4. Relevance to PO, Relevance to PEO and PSOs

PO	Program Objective (PO)
PO1	Foster learning through accumulation of knowledge.
PO2	Apply knowledge of management theories and practices to solve business problems.
PO3	Foster analytical and critical thinking abilities for data-based decision making.
PO4	Ability to develop value based leadership.
PO5	Ability to understand, analyse and communicate global, economic, legal and ethical aspects of business.
PO6	Ability to lead self and others in the achievement of organisational goals, contributing effectively to a team environment.

## PDP Report

PO7	Ability to adopt various tools decision making and problem solving.
<b>PSO</b>	<b>Program Specific Objective (PSO)</b>
PSO1	Demonstrate effective response to industry challenges by applying managerial tools and techniques for a sustainable society
PSO2	Appraise the complex specificities of Indian Business to garner global reputation
PSO3	Develop a holistic thinking solopreneur for a self-sufficient society

### 5. Activity Overview:

#### Detailed contents

Day-1	Calculations of Tests of Normality, Skewness, Kurtosis, Shapiro and Kolmogorov Tests
Day-2	How to check Multivariate Normality
Day-3	Interaction between Type I and Type II Error and Power of Test
Day-4	Calculations of One Sample t Test, Paired Sample, Independent Sample t Test and Chi Square Test
Day-5	ANOVA and Regression, mathematical similarity
Day-6	pp plot and qq plot
Day-7	Maximum likelihood estimate and its relevance in parameters quantification

### 6. Guest/Speakers' Profile:

## PDP Report

### Resource persons:



**Dr. G S Vijaya**  
Professor  
CMS Business School  
JAIN (Deemed-to-be University)

Dr. G.S. Vijaya is currently working as Professor in Decision Science Area. She has worked in various reputed institutions like Sri Jayachamarajendra College of Engineering, Mysore, Birla Institute of Technology, Mesra, Ranchi, Nitte Meenakshi Institute of Technology, Bangalore and JAIN (Deemed-to-be University). She has worked with Al Yamamah University, Riyadh, Kingdom of Saudi Arabia for six years.

Dr. Vijaya is a PhD Guide in Management, JAIN (Deemed-to-be University) since 2013. She is a Life Member of Indian Society for Technical Education and IAENG International Association of Engineers. She has participated in the MDPs, FDPs, workshops, seminars, Staff Development Programs, reviewed books and written articles. She has presented/published papers at the National and International level including Scopus and Web of Science.



**Dr. Chaya Bagrecha**  
Professor  
CMS Business School  
JAIN (Deemed-to-be University)

Passion for learning new things and sharing knowledge has led Dr. Chaya Bagrecha, Professor of Finance at CMS Business School, JAIN (Deemed-to-be University) to a conscious decision of opting for teaching as a profession. She comes from a business family, which has helped her in hands-on training in entrepreneurial skills. She has done her MBA from Kuvempu University and secured First rank and two gold medals for the best outgoing student in 1993.

Having done her NET with JRF and SLET, she has come a long way, both in terms of academics and research. She was awarded the doctoral for her research in corporate governance. She is the recognized research guide of JAIN (Deemed-to-be University) and Bangalore University.

She has published more than thirty papers in various journals and presented more than fifty papers in National and International conferences. Her research interests are in the diverse areas of Corporate Governance, Universal Banking, Stock markets, Poverty alleviation, and Entrepreneurship. She has a keen interest in learning new packages and analytical tools in Statistics.

## PDP Report



**Dr. Rupesh Kumar Sinha**  
 Assistant Professor  
 CMS Business School  
 JAIN (Deemed-to-be University)

Dr. Rupesh Kumar Sinha has more than 25 years of experience in Management Education and Software industry and at present, he is faculty at CMS Business School, JAIN (Deemed-to-be University) Bangalore. He is a NASSCOM Licensed Master Trainer and Microsoft Certified Professional in Visual Basic, Windows Architecture. He has designed various courses in Analytics, Operations Management, Supply Chain Management at the level of MBA in the Business School and individual courses like Advanced Excel, Cognos, Tableau, Watson Analytics, SPSS etc. Before joining Business School he worked with Krupanidhi School of Management and was Professor in the area of Analytics.

He worked at the Imperial College, Bangalore as Academic Head for five months, and his role was to give training and developing course on Analytics. He gave training for IBM Analytics courses (IBM Cognos and IBM Watson) in various B-Schools and Engineering colleges. He worked with IFIM Business School, Bangalore for 10 years as HOD of Operations and IT.

### 7. Summary and Key Learnings of the session:

Introduction to Parametric and Non parametric tests, Descriptive Statistics, Measurement scales and Hypothesis testing One Sample T Test, Paired Sample, Independent Sample T Test, ANOVA & Post Hoc and non-parametric tests, Chi Square Test; Correlation & Regression and Practical sessions

### Participant details:

Name	Qualification	Institution	Designation
Dr.Lubna Ambreen	MBA, PhD	CMS BUSINESS SCHOOL JAIN (DEEMED-TO-BE UNIVERSITY)	ASST PROFESSOR
S.Yavana Rani	ME.MBA.PHD	CMS BUSINESS SCHOOL JAIN UNIVERSITY	Associate Professor
Satyajeet Nanda	PhD	CMS BS	Associate professor
Sudip Das	MBA	UPES	Research Scholar
VINOTH KUMAR V	PHD	CMS B SCHOOL	ASST PROFESSOR
Debamitra Ray	MCom	Jain Deemed to be University	PhD scholar

## PDP Report

Ruchi Vohra	M.com, pursuing PhD from Jain University	New Horizon College	Research Scholar/ Assistant Professor
Jyothi Priya R	M.com, pursuing PhD at Jain University	New Horizon College, Marathahalli	Assistant professor / Research Scholar
Achal Dilip Kumar	M.Phil	Indian Army	Brigadier
Dr. J. Gayathri	M.Com, M. B.A., I.C.W.A (Inter), Ph.D	Bharathidasan University	Associate Professor
Meghana S	MBA	Ballari Business College	Assistant professor
N JAYAMMA	MBA NET	Govt First Grade college Sindhanoor	Assistant Professor
Manohar Babu G	MBA (Pursuing PhD)	Shree Medha Degree College Ballari	Assistant Professor
Reena R	MBA ( Pursuing PhD)	SGT Degree College Ballari	Assistant Professor
Manita D Shah	Ph.D	Jain ( Deemed-to-be University)	Professor
M.GOVINDARAJ	BBA., LL.B., MBA., Ph.D.,	CMS BUSINESS SCHOOL	ASSOCIATE PROFESSOR
Seema Sambargi	M.Sc MBA PhD	CMS-JU	Professor
Sanjana Malhotra	PhD Psychology	Jain University	Previously was a Research Fellow in Dept. of Psychology Jain University
Sirisha T	MBA	ArSquare development Pvt Ltd	Research and Marketing head
Sowjanya Rajesh	MBA Marketing	Harnahalli Ramaswamy institute of higher education	Assistant professor
Meghana MD	MBA marketing	Cms jain university	.
Deepa K Damodaran	Ph D	JAIN (Deemed to be University), Kochi	Assoc. Professor
Saraswathi Satish	MA, MPhil	RV Institute of legal studies	Assistant professor
Surjyadeb Goswami	PhD Scholar	CMS Business School	PhD Scholar
DEEPA BISWAL	PhD (Continuing)	UTKAL UNIVERSITY	PhD Research Scholar

### PDP Report

K KUMAR	MBA	Bangalore university	PhD scholar
SHALINI R	PhD	Jain Deemed to be University	Associate Professor
Jitesh Chandra Das	MBA	Global Academy Of Technology	PHD Scholar
CHAITRA G.R	MBA, (Pursuing PhD at Jain)	JAIN (DEEMED-TO-BE-UNIVERSITY)	RESEARCH SCHOLAR
MONOO JOHN	MBA MHRM MPHIL PhD CBMA	FACULTY OF MANAGEMENT STUDIES CMS BUSINESS SCHOOL	ASSOCIATE PROFESSOR
Sona Kumari H R	MA (Economics)	Bangalore University	No
Indira A	M.B.A.	Happy Valley Business School	Associate Professor
Dr. SIREESHA NANDURI	Ph.D	JAIN	ASSISTANT PROFESSOR
Sneha Burman	PhD	Jain University	Assistant professor of Psychology
Shurllly Tiwari		PhD Scholar	PhD Scholar

**8. Details of Winners (if applicable): - Not applicable**

**9. Details of the judges (if applicable): - Not applicable**

**10. Attendance records: Participants list**

**11. Participants' Feedback, Feedback Analysis and Attainment Calculation:**

## PDP Report

	The learning outcomes of the sessions were achieved	The sessions of the FDP were useful	The resource person was effective	The communication from the FDP team was timely and helpful	Technology oriented learning from the comforts of our home/office was a welcome method
Strongly agree	82	88	87	88	91
Agree	32	27	29	28	24
Neutral	3	2	1	1	2
Disagree	0	0	0	0	0
Strongly disagree	0	0	0	0	0

### 12. Proposals for the Event/Programme:

Date: 19/11/2021

For Director's kind approval

Dear Sir,

Sub: Application for approval of online/virtual 7-day virtual PDP on Decoding statistics for data analysis. We are proposing to schedule a FDP on the above topic “ scheduled from 21st to 28<sup>th</sup> March 2022.

The details are as follows:

**Title of the Conclave:** 7-day virtual PDP on Decoding statistics for data analysis

**Duration:** 7 days

**Resource persons:**

Dr. G S Vijaya, Dr. Chaya Bagrecha and Dr. Rupesh Sinha

**Expected participants:** 30 faculty members

Kindly approve the same.

Kind Regards

Faculty Coordinator

Signature

Dean

Approval Authority

Signature

Director

Approval Authority

Signature



### PDP Report

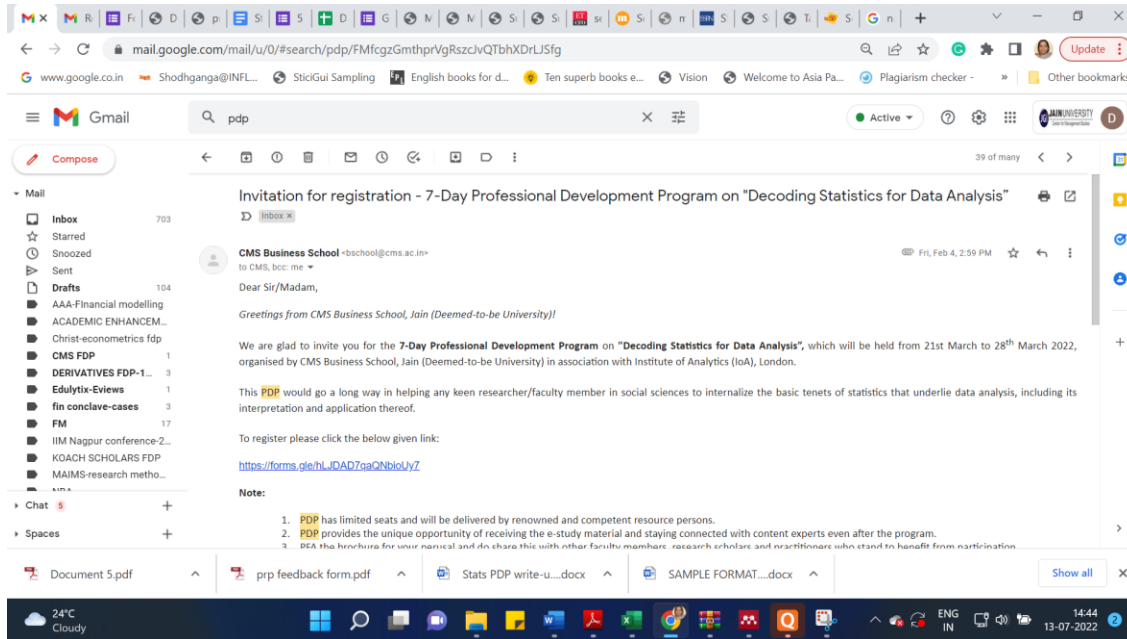
**13. Minutes of Meetings:**

<b>Meeting Title</b>	Initiation meeting on the Proposed PDP on Decoding statistics for data analysis	
<b>Date of Meeting</b>	19/11/2021	
<b>Meeting Venue</b>	ZOOM, Online Platform	
<b>Meeting Agenda</b>	To discuss the details & possibility of the FDP	
<b>In Attendance</b>	Name	Title/Department/Organization
1	Dr. Madhavi R	Associate Professor
2	Dr Chaya Bagrecha	Professor
<b>Key Meeting Outcomes</b>		
	<p>A better understanding of the feasibility and content of this proposed FDP (Seven days program) The dates proposed were accepted (March 2022). Through Online Mode.</p> <p>The requirements of the Resource Persons were noted. Dr. Madhavi R, Dr. Chaya Bagrecha and Dr. John Valluri will be the coordinators for this FDP</p>	
<b>Action Plans, if any (along with the First Person Responsible)</b>		
1.	Dr. Madhavi will get the brochure prepared. Dr. John Valluri will take care of the registrations and communications.	
2.	Dr. Madhavi will connect with the other associated members to discuss the details of the FDP and will get the certificates designed	
3.		
	Discussion with resource persons Dr. G S Vijaya, Dr. Chaya Bagrecha and Dr. Rupesh Sinha about topics to be covered	

**14. Budget: -** Not applicable as the resource persons are inhouse faculty members.

## PDP Report

### 15. Trailing Emails/communications:



**Invitation for registration - 7-Day Professional Development Program on "Decoding Statistics for Data Analysis"**

**CMS Business School** <bschool@cms.ac.in>  
to CMS, bcc: me

Fri, Feb 4, 2:59 PM

Dear Sir/Madam,

*Greetings from CMS Business School, Jain (Deemed-to-be University)!*

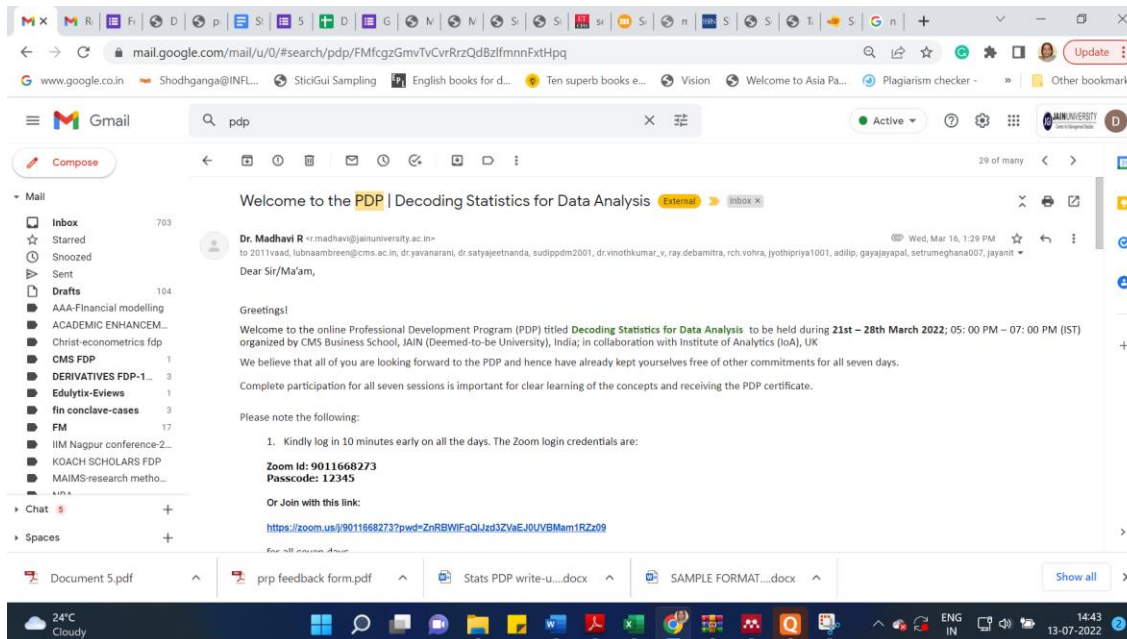
We are glad to invite you for the **7-Day Professional Development Program on "Decoding Statistics for Data Analysis"**, which will be held from 21st March to 28<sup>th</sup> March 2022, organised by CMS Business School, Jain (Deemed-to-be University) in association with Institute of Analytics (IoA), London.

This PDP would go a long way in helping any keen researcher/faculty member in social sciences to internalize the basic tenets of statistics that underlie data analysis, including its interpretation and application thereof.

To register please click the below given link:  
<https://forms.gle/hLJDAD7qaQNblolY7>

**Note:**

1. PDP has limited seats and will be delivered by renowned and competent resource persons.
2. PDP provides the unique opportunity of receiving the e-study material and staying connected with content experts even after the program.
3. PEA the brochure for your interest and do share this with other faculty members, research scholars and non-tenure who stand to benefit from participation.



**Welcome to the PDP | Decoding Statistics for Data Analysis**

**Dr. Madhavi R** <madhavi@jainuniversity.ac.in>  
to 2811vaad, lubnaambreen@cms.ac.in, dr.satyajeetnanda, sudipdm2001, dr.vinotkumar\_v, ray.debamitra, rch.vohra, jyothipriya1001, adilip, gayajayapal, setrumeghana007, jayanant

Wed, Mar 16, 1:29 PM

Dear Sir/Ma'am,

Greetings!

Welcome to the online Professional Development Program (PDP) titled **Decoding Statistics for Data Analysis** to be held during **21st – 28th March 2022; 05: 00 PM – 07: 00 PM (IST)** organized by CMS Business School, JAIN (Deemed-to-be University), India; in collaboration with Institute of Analytics (IoA), UK

We believe that all of you are looking forward to the PDP and hence have already kept yourselves free of other commitments for all seven days.

Complete participation for all seven sessions is important for clear learning of the concepts and receiving the PDP certificate.

Please note the following:

1. Kindly log in 10 minutes early on all the days. The Zoom login credentials are:  
**Zoom Id: 9011668273**  
**Passcode: 12345**  
**Or Join with this link:**  
<https://zoom.us/j/9011668273?pwd=ZnRBWlFqQUxkd3ZVaEJOUVBMam1RZz09>

### 16. Any other related details: - No

## PDP Report

### 17. Pictures for the Event:

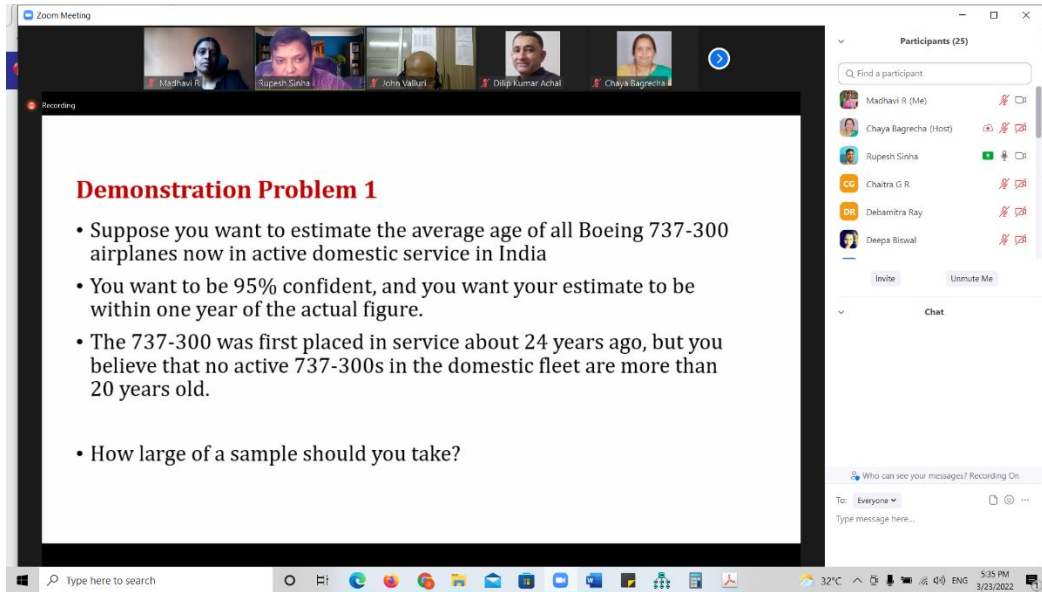


Figure 1: 7-day virtual PDP on Decoding statistics for data analysis -21<sup>st</sup> to 28<sup>th</sup> March 2022

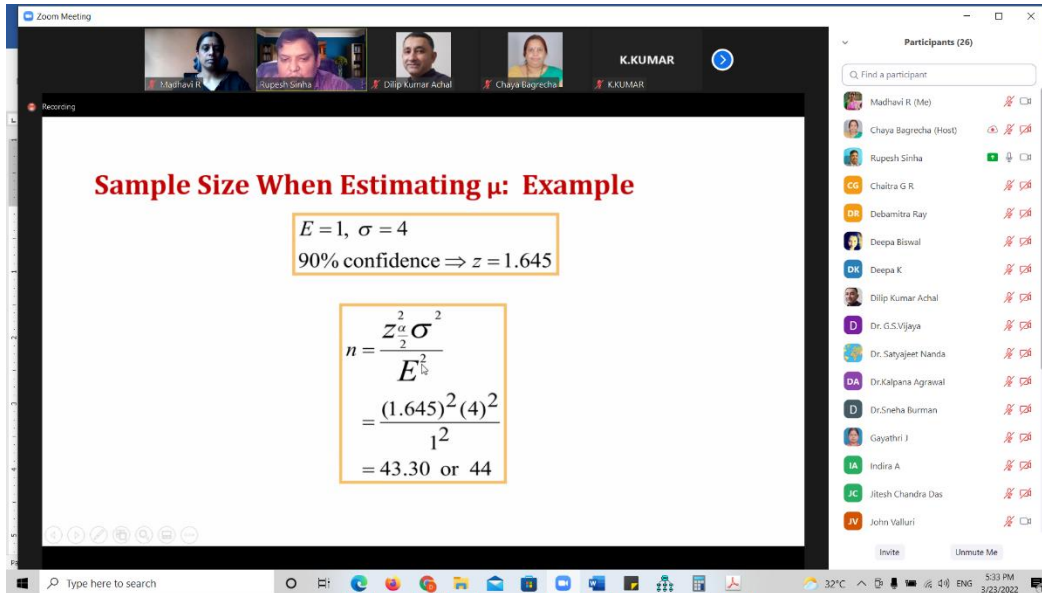


Figure 2 7-day virtual PDP on Decoding statistics for data analysis -21<sup>st</sup> to 28<sup>th</sup> March 2022

## PDP Report

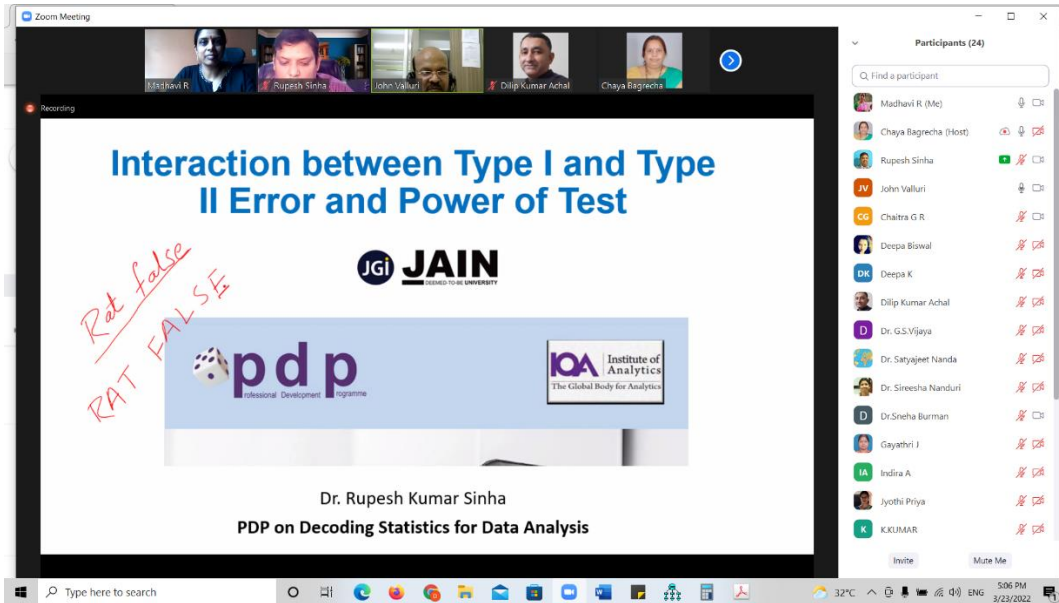


Figure 3 7-day virtual PDP on Decoding statistics for data analysis -21<sup>st</sup> to 28<sup>th</sup> March 2022

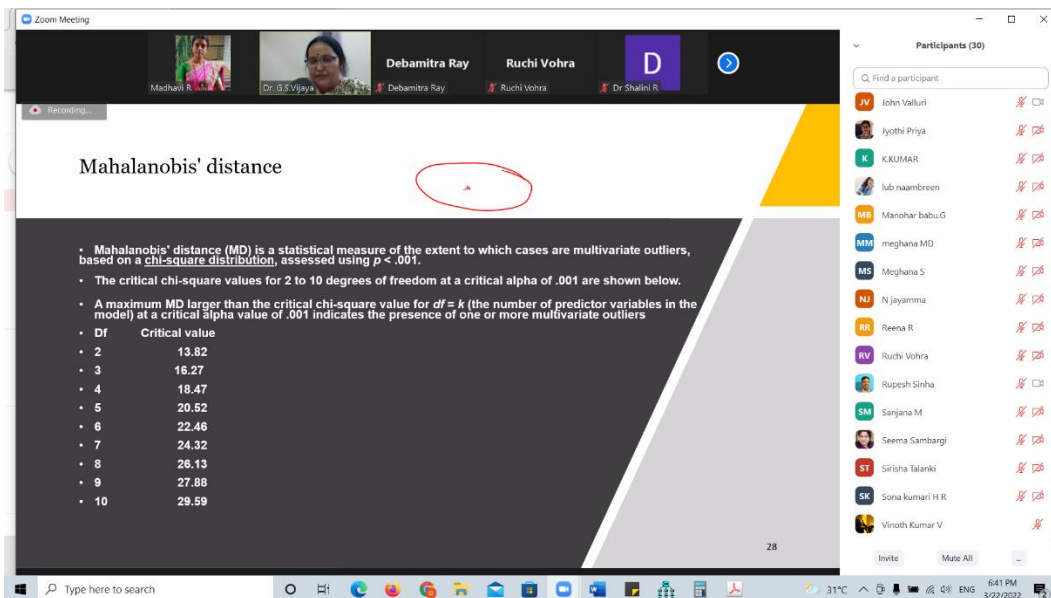
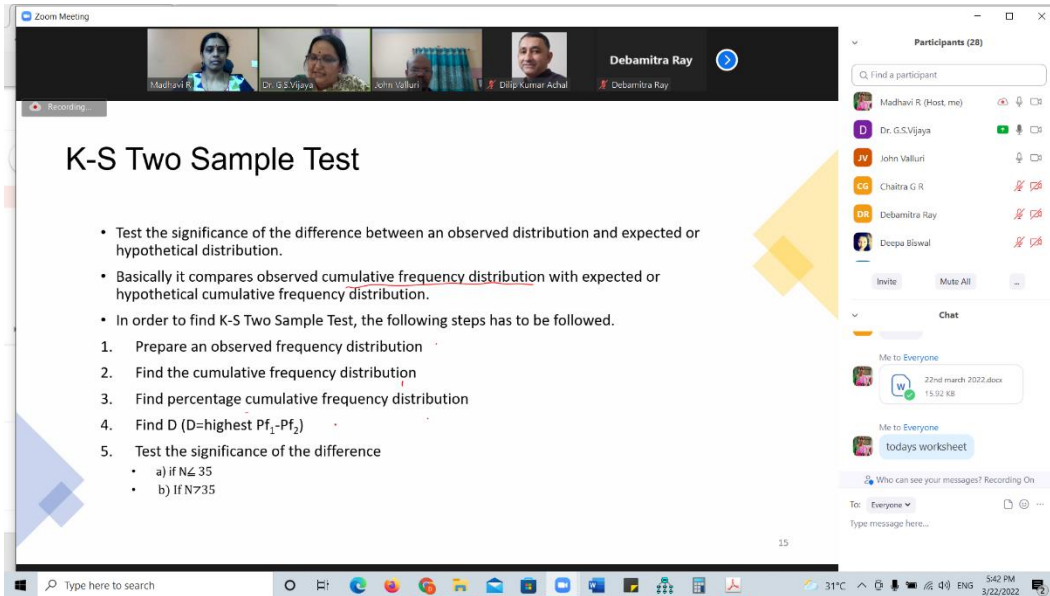


Figure 4 7-day virtual PDP on Decoding statistics for data analysis -21<sup>st</sup> to 28<sup>th</sup> March 2022

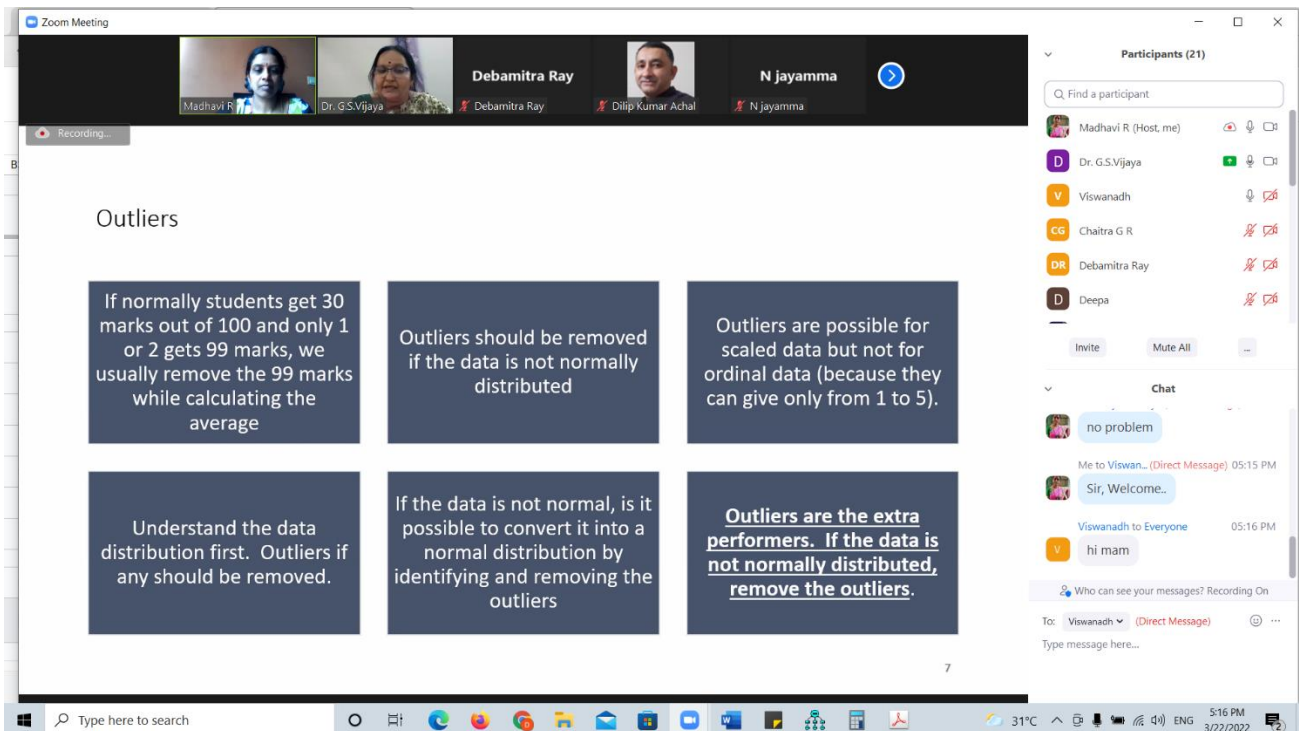
## PDP Report



**K-S Two Sample Test**

- Test the significance of the difference between an observed distribution and expected or hypothetical distribution.
- Basically it compares observed cumulative frequency distribution with expected or hypothetical cumulative frequency distribution.
- In order to find K-S Two Sample Test, the following steps has to be followed.
  1. Prepare an observed frequency distribution
  2. Find the cumulative frequency distribution
  3. Find percentage cumulative frequency distribution
  4. Find D ( $D = \text{highest } PF_1 - PF_2$ )
    - a) if  $N \leq 35$
    - b) if  $N > 35$

Figure 5-7-day virtual PDP on Decoding statistics for data analysis -21<sup>st</sup> to 28<sup>th</sup> March 2022



**Outliers**

If normally students get 30 marks out of 100 and only 1 or 2 gets 99 marks, we usually remove the 99 marks while calculating the average

Outliers should be removed if the data is not normally distributed

Outliers are possible for scaled data but not for ordinal data (because they can give only from 1 to 5).

Understand the data distribution first. Outliers if any should be removed.

If the data is not normal, is it possible to convert it into a normal distribution by identifying and removing the outliers

**Outliers are the extra performers. If the data is not normally distributed, remove the outliers.**

Figure 6-7-day virtual PDP on Decoding statistics for data analysis -21<sup>st</sup> to 28<sup>th</sup> March 2022

## PDP Report

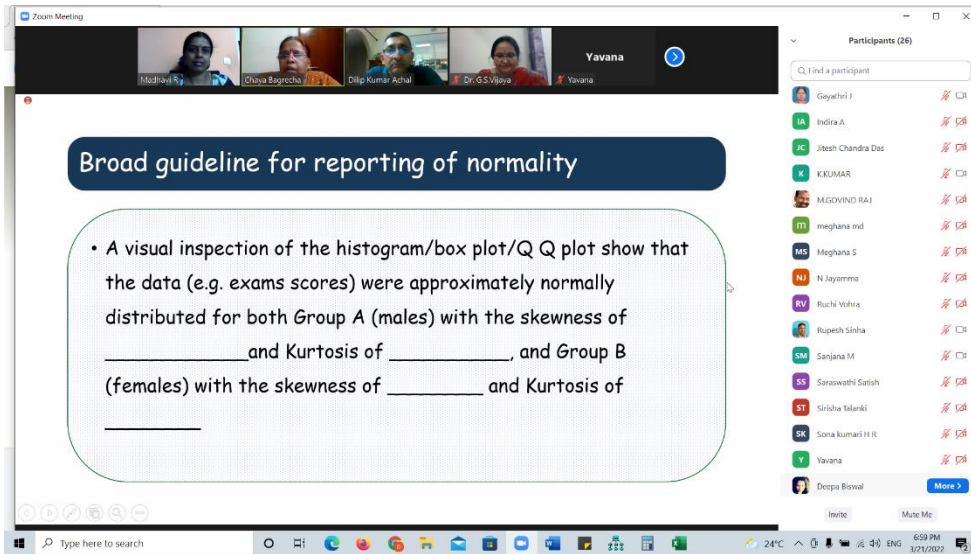


Figure 7-7-day virtual PDP on Decoding statistics for data analysis -21<sup>st</sup> to 28<sup>th</sup> March 2022

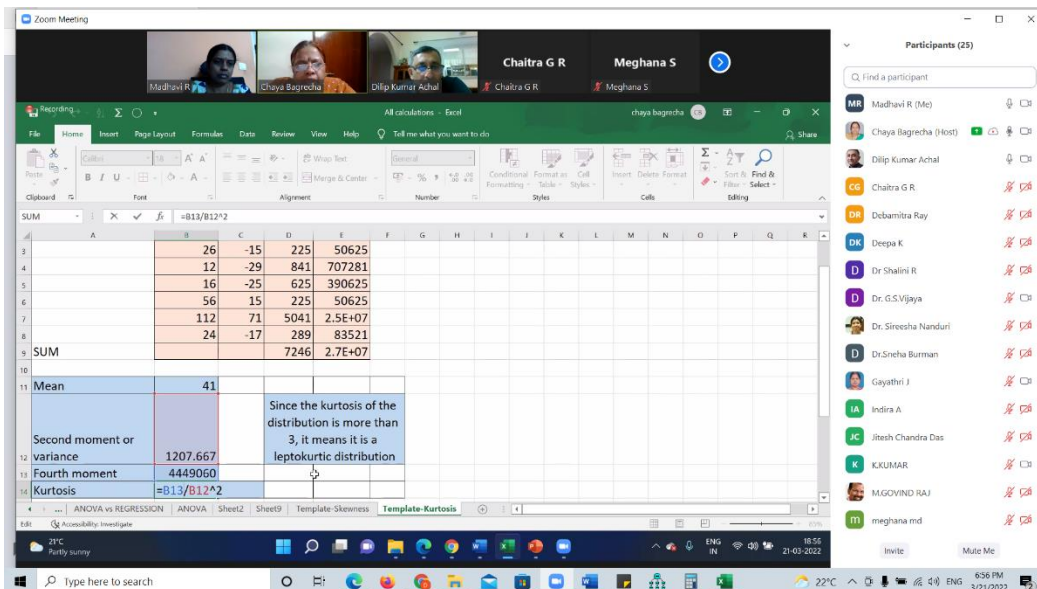


Figure 8 -7-day virtual PDP on Decoding statistics for data analysis -21<sup>st</sup> to 28<sup>th</sup> March 2022

## PDP Report

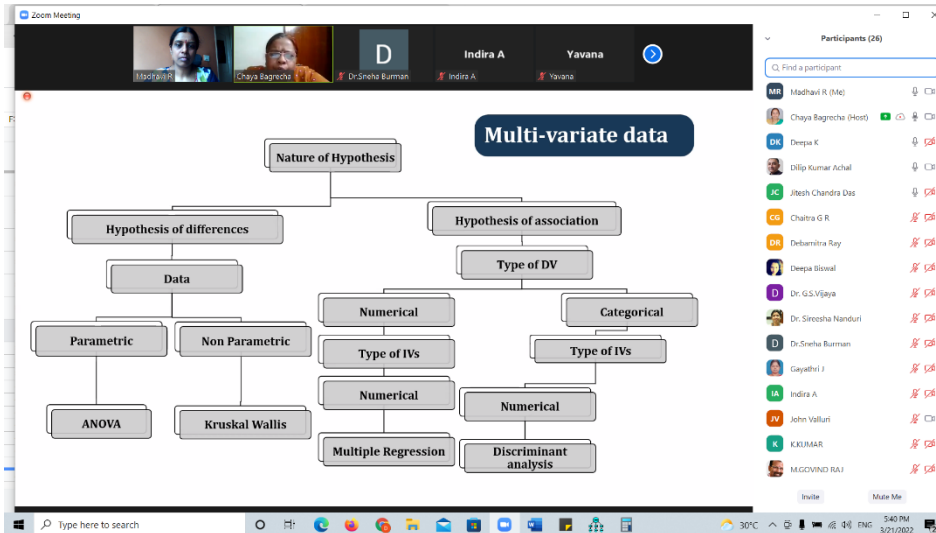


Figure 9-7-day virtual PDP on Decoding statistics for data analysis -21<sup>st</sup> to 28<sup>th</sup> March 2022

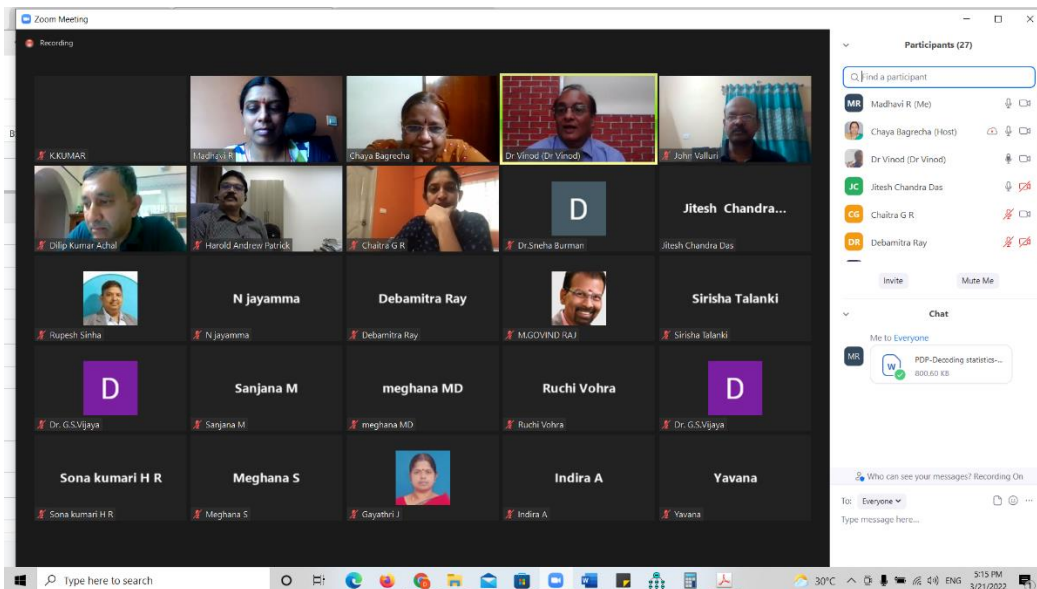


Figure 10-7-day virtual PDP on Decoding statistics for data analysis -21<sup>st</sup> to 28<sup>th</sup> March 2022

## PDP Report

**These are the Zoom recordings for all the days of the PDP:**

### Day 1

Date: Mar 21, 2022 04:50 PM India

[https://zoom.us/rec/share/p9UH5mSAsP2jBFOxh0IA2kPjyMfuPL\\_JfDRJ-Uf88JvBF4809\\_ETP-YdY3XPdXUl.wYP49qToI0EgTCwz](https://zoom.us/rec/share/p9UH5mSAsP2jBFOxh0IA2kPjyMfuPL_JfDRJ-Uf88JvBF4809_ETP-YdY3XPdXUl.wYP49qToI0EgTCwz)

Passcode: h@G7&3yZ

### Day 2

Date: Mar 22, 2022 04:50 PM India

[https://zoom.us/rec/share/i\\_Laanmi8Z2cGil\\_s1Y\\_4cbXuai07eDjBnOn9zDPL62GlzL1YALCtI8a-DJOKg.SqfpeJbe98Ls5x8O](https://zoom.us/rec/share/i_Laanmi8Z2cGil_s1Y_4cbXuai07eDjBnOn9zDPL62GlzL1YALCtI8a-DJOKg.SqfpeJbe98Ls5x8O)

Passcode: cZ04Hp%1

### Day 3

Date: Mar 23, 2022 04:50 PM India

<https://zoom.us/rec/share/G7dCFNouloYZTci4euUennhvG6Mb79yOap2FJS7U00BA9OA2DgQ2qOgMQ7Mw8jW-.5sHUBRSibU3LzAoa>

Passcode: u@Cx3\*HU

### Day 4

Date: Mar 24, 2022 04:50 PM India

[https://zoom.us/rec/share/F7DnVhm\\_O-MgQK2uu4tGVe3a4OPxgIBwADtl4G4cSzYO0J4LZtR7YITgXYwuGW8.TIzqEhh1A6nhxKH9](https://zoom.us/rec/share/F7DnVhm_O-MgQK2uu4tGVe3a4OPxgIBwADtl4G4cSzYO0J4LZtR7YITgXYwuGW8.TIzqEhh1A6nhxKH9)

Passcode: 3%d4y0a#

### Day 5

Date: Mar 25, 2022 04:50 PM India

[https://zoom.us/rec/share/v3cw9NJwgLN77CgBXKTuukXIP9Fox3Pv9JkTFIBihZ6Iyv\\_s0MIKIXdnmnppuwVK.fqdLW0aVVMen\\_h4n](https://zoom.us/rec/share/v3cw9NJwgLN77CgBXKTuukXIP9Fox3Pv9JkTFIBihZ6Iyv_s0MIKIXdnmnppuwVK.fqdLW0aVVMen_h4n)

Passcode: YH@26Ytt

### Day 6

Date: Mar 26, 2022 04:50 PM India

<https://zoom.us/rec/share/lezmjErkJ5NByiDVA1s6TXXb0bcD47W73D1VKOFdJHx-sYCqOQzdbUJdIN-vwV5G.s9UFqGiRaQ3Bhm7j>

Passcode: tpS9K6&0

### Day 7

Date: Mar 28, 2022 04:50 PM India



<https://zoom.us/rec/share/YRMwJuWzAPx6QvwqxqswHpG7UUCQqBcsqJM34JiY3s2cmYobc5NKgj-LBMqJFE11.XZZX8IJXTjRYYXw8>


Passcode: 5\$WQ5JW


Brochure Screenshot



# PDP Report




**7-Day Virtual Professional Development Program on**  
**Decoding Statistics for Data Analysis**  
 organised by  
 CMS Business School, JAIN (Deemed-to-be University)  
 in collaboration with  
**Institute of Analytics (UK)**

21<sup>st</sup>- 28<sup>th</sup> March 2022 | 05:00 PM - 07:00 PM (IST)

[bschool.cms.ac.in](http://bschool.cms.ac.in)



**JAIN (Deemed-to-be University)**

JAIN (Deemed-to-be University) is a comprehensive and student-focused University that works towards excellence in quality education, research and entrepreneurial development. JAIN (Deemed-to-be University) has been awarded the Graded Autonomy status by the University Grants Commission (UGC) and A++ Grade by the National Assessment and Accreditation Council (NAAC), Karnataka State Universities Rating Framework (KSURF), Government of Karnataka has awarded JAIN as a '5 Stars' Institution in the category of 'YOUNG University' in 2019. JAIN has also been ranked 5th among the top private universities in India by the India Today survey. The University was ranked 99th nationally for the year 2020 by National Institute of Ranking Framework (NIRF). JAIN (Deemed-to-be University) is an authorized partner for 'Study in India' (SII) program. It is a member of the prestigious Jain Group of Institutions, headquartered in Bengaluru, India.

**CMS Business School, JAIN (Deemed-to-be University)**

CMS Business School, an integral part of JAIN (Deemed-to-be University) is India's leading business school with an international perspective. CMS Business School is a place where ideas are born, theories are debated and business is imbibed. Much more than a source of knowledge, it is a catalyst that makes a difference to the career and the personal progress of its students. CMS Business School has been ranked 41st in all India and 16th in South Zone by 'Outlook - ICARE MBA Rankings - 2019' Research Survey. CMS Business School was placed in the rank band 76-100 for the year 2019 from National Institute of Ranking Framework, Ministry of HRD, Government of India and it has also been awarded 'A++' Grade, in Karnataka, by CRISIL. The MBA program has a strong foundation in academic research; it is designed to tackle the real world issues faced by international business community today.

**Institute of Analytics (IOA):**

The Institute of Analytics (IOA) is the Professional Body for Analytics and Data Science professionals in the UK and International. IOA is a not-for-profit organisation that exists to promote greater awareness, understanding and innovation in Analytics. IOA is fully supported in their mission by leading organisations in the sector. The Institute of Analytics provides members with the opportunity to network with other professionals in the industry, to learn about career development opportunities, to share knowledge and expertise, to access continuous professional development programmes and to carry the official designation of membership.

**About the PDP**

In today's world of data driven decision-making, many softwares such as SPSS, AMOS, R, Stata, EViews, Gretl, etc. help one simplify complex statistical analysis, apart from saving time and effort. However, they often leave the curious mind with the following questions:

- What are the assumptions behind this test?
- What is the formula for the test?
- What is the statistical logic behind this test? And many more

To address such inquisitive questions, this Professional Development Program (PDP) on 'Decoding Statistics for Data Analysis' uncovers such knowledge to serve the learning interests of diverse stakeholders such as academicians, PG students, research scholars aspiring data scientists, students pursuing data sciences and business analytics, etc. The need to understand statistics as the core fabric of data driven decisions has over taken every aspect of business today with an intent to move from experience based projections to evidence based predictions. This offers high relevance to the decisions at operational and strategic level.

**Pedagogy:**

This Professional Development Program focuses on allowing participants to learn statistical concepts from the basic to intermediate level to better understand the usage of statistical software packages and interpretation of output. Exercises are actively included for practicing the discussed concepts and applications. Participants are encouraged to bring their live data and queries for discussion and solutions. The online sessions will be delivered on Zoom (secure) platform. To ensure focused learning and promote interactions, this PDP will cater to the first 25 registrations.

The event also seeks a closed-door policy. Such a policy allows only the registered participants and the organisers to be a part of it. This ensures the flow of learning smoothly and allows all the participants to engage in discussions without interruptions.

**Dates:** 21<sup>st</sup>- 28<sup>th</sup> March 2022      **Duration:** 14 Hours  
**Time:** 05:00 PM - 07:00 PM (IST)      (+16 hours of asynchronous content)

**Objectives:**

- To uncover the basic tenets of statistics that aid data analysis
- To explore descriptive and inferential statistics without the use of a statistical software

**Detailed contents**

Day-1	Calculations of Tests of Normality, Skewness, Kurtosis, Shapiro and Kolmogorov Tests
Day-2	How to check Multivariate Normality
Day-3	Interaction between Type I and Type II Error and Power of Test
Day-4	Calculations of One Sample t Test, Paired Sample, Independent Sample t Test and Chi Square Test
Day-5	ANOVA and Regression, mathematical similarity
Day-6	pp plot and qq plot
Day-7	Maximum likelihood estimate and its relevance in parameters quantification

**Learning outcome:**  
First hand practical exposure to descriptive and inferential statistical tools for data analysis

**Participant Profile:**  
This PDP will be of interest to the beginners and intermediate researchers in exploring descriptive and inferential statistical tools for data analysis. It will also help them in the interpretation for each statistical tool for research paper writing and thesis writing.

**Resource persons:**



**Dr. G S Vijaya**  
Professor  
CMS Business School  
JAIN (Deemed-to-be University)

Dr. G. S. Vijaya is currently working as Professor in Decision Science Area. She has worked in various reputed institutions like Sri Jayachamarajendra College of Engineering, Mysore, Birla Institute of Technology, Mesra, Ranchi, Nitte Meenakshi Institute of Technology, Bangalore and JAIN (Deemed-to-be University). She has worked with Al Yamamah University, Riyadh, Kingdom of Saudi Arabia for six years.

Dr. Vijaya is a PhD Guide in Management, JAIN (Deemed-to-be University) since 2013. She is a Life Member of Indian Society for Technical Education and IAENG International Association of Engineers. She has participated in the MDPs, FDPs, workshops, seminars, Staff Development Programs, reviewed books and written articles. She has presented/published papers at the National and International level including Scopus and Web of Science.



**Dr. Chaya Bagrecha**  
Professor  
CMS Business School  
JAIN (Deemed-to-be University)

Passion for learning new things and sharing knowledge has led Dr. Chaya Bagrecha, Professor of Finance at CMS Business School, JAIN (Deemed-to-be University) to a conscious decision of opting for teaching as a profession. She comes from a business family, which has helped her in hands-on training in entrepreneurial skills. She has done her MBA from Kuvempu University and secured First rank and two gold medals for the best outgoing student in 1993.

Having done her NET with JRF and SLET, she has come a long way, both in terms of academics and research. She was awarded the doctoral for her research in corporate governance. She is the recognized research guide of JAIN (Deemed-to-be University) and Bangalore University.

She has published more than thirty papers in various journals and presented more than fifty papers in National and International conferences. Her research interests are in the diverse areas of Corporate Governance, Universal Banking, Stock markets, Poverty alleviation, and Entrepreneurship. She has a keen interest in learning new packages and analytical tools in Statistics.



**Dr. Rupesh Kumar Sinha**  
Assistant Professor  
CMS Business School  
JAIN (Deemed-to-be University)

Dr. Rupesh Kumar Sinha has more than 25 years of experience in Management Education and Software industry and at present, he is faculty at CMS Business School, JAIN (Deemed-to-be University) Bangalore. He is a NASSCOM Licensed Master Trainer and Microsoft Certified Professional in Visual Basic, Windows Architecture. He has designed various courses in Analytics, Operations Management, Supply Chain Management at the level of MBA in the Business School and individual courses like Advanced Excel, Cognos, Tableau, Watson Analytics, SPSS etc. Before joining Business School he worked with Krupandhi School of Management and was Professor in the area of Analytics.

He worked at the Imperial College, Bangalore as Academic Head for five months, and his role was to give training and developing course on Analytics. He gave training for IBM Analytics courses (IBM Cognos and IBM Watson) in various B-Schools and Engineering colleges. He worked with IFIM Business School, Bangalore for 10 years as HOD of Operations and IT.

## PDP Report

### Fee (per participant)

Industry Professionals  
₹ 2,000/- inclusive of taxes

Academia/Research Scholars  
₹ 1,500/- inclusive of taxes

**Payment Procedure**  
Registration Fee must be paid by  
Demand Draft/Digital Payments

### Online Transfer / Bank Transfer

Bank Name : Karur Vysya Bank  
Branch : Jayanagar, Bengaluru  
Account Name : Jain University  
Account Number : 131515500038088  
IFSC Code : KVB0001315

### Patrons

**Dr. Chenraj Roychand**  
Chancellor, JAIN (Deemed-to-be University)

**Col (Hony). Dr. N. Sundararajan**  
Pro Chancellor, JAIN (Deemed-to-be University)

**Professor (Dr.) Raj Singh**  
Vice-Chancellor, JAIN (Deemed-to-be University)

**Dr. Easwaran Iyer**  
Pro Vice-Chancellor, JAIN (Deemed-to-be University)

### Advisory Board

**Dr. Dinesh Nilkant**  
Director, CMS Business School, JAIN (Deemed-to-be University)

**Dr. Harold Andrew Patrick**  
Professor & Dean - Academics, CMS Business School, JAIN (Deemed-to-be University)

Dr. Vinod Kumar Murti  
Country Head - India, Institute of Analytics (IOA), UK

### Faculty Development Program Cell

**Dr. Madhavi R**  
Associate Professor  
CMS Business School  
JAIN (Deemed-to-be University)  
+91 9886593254  
r.madhavi@jainuniversity.ac.in

**Dr. Chaya Bagrecha**  
Professor  
CMS Business School  
JAIN (Deemed-to-be University)  
+91 9844733999  
dr.chayabagrecha@cms.ac.in

**Dr. V Y John**  
Assistant Professor  
CMS Business School  
JAIN (Deemed-to-be University)  
+91 8106036188  
dr.vy\_john@cms.ac.in

\*e-certificates will be provided to all the registered participants

Registration link <https://forms.gle/hLJDAD7qaQNbIoUy7>

Joining link shall be provided after registration