



**Department of Statistics,  
Assam University, Silchar-788011**

**REPORT ON THE FACULTY DEVELOPMENT PROGRAM ON “DATA ANALYTICS  
AND DECISION MAKING” CONDUCTED BY THE DEPARTMENT OF STATISTICS,  
IN COLLABORATION WITH INDIAN STATISTICAL INSTITUTE, KOLKATA**

**21<sup>ST</sup> – 25<sup>TH</sup> November, 2022**

The Department of Statistics, Assam University organized a 5 day Faculty Development Program from 21<sup>st</sup> to 25<sup>th</sup> November, 2022 in collaboration with the Statistical Quality Control & Operation Research Division, Indian Statistical Institute, Kolkata. The theme of the FDP was “Data Analytics and Decision Making”. The flyer of the event can be seen below.



*. The Event Flyer*

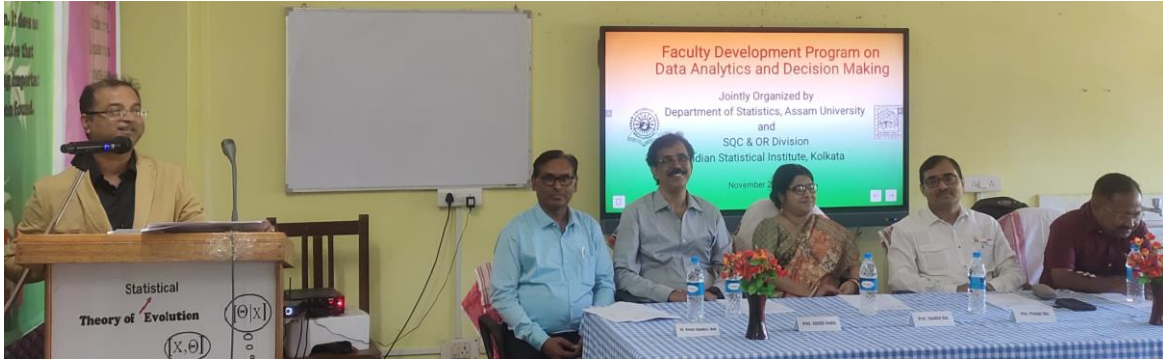
The aim of the FDP was is to train the participants comprising of Faculty members, Research Scholars and Students on the following sub-themes:

- Data Quality : Type of Data, Structured/Unstructured Data, BIG Data, Quality of Data, Principles of Data Science
- Data Pre-Processing: Missing Data- Missing value replenishment, Merging data files, Appending the data files, Transformation or normalization and Random Sampling
- Data Visualization (Exploratory Analytics): Frequency Distribution, Histogram, Box Plot, Dot Plot, Stem-and-Leaf Plot, Bar Chart, Column Chart, Stack Column Chart, Line Chart, Time Series Plot, Parallel Coordinates, Pie Chart, Area Chart, Scatter Plot, Scatter plot Matrix, Bubble Chart, Radar Plot, Pareto Chart, Funnel Chart, Surface Chart, Geographical Mapping, Tree Diagram / Dendogram, Chernoff Faces, Stick Figures, Heat Map, Mosaic Plot, Sieve Plot, Silhouette Plot
- Predictive Analytics: Special Regression Models- Principal Component, Partial Least Squares, Binary logistics, Ordinal Logistics
- Decision Making: Normality Test, Tests of Hypothesis, ANOVA, Designs of Experiment, Response Surface Methodology, Multi Criteria Decision Making, Desirability Optimization, Evolutionary Optimization
- Time Series Analysis: Components of time series, Choosing of appropriate ARIMA model, Time series Models with explanatory variables, Panel data regression
- Simulation: Simulation from Discrete, Continuous and multivariate distribution

The schedule of the FDP was as follows:

	<b>10:15 to 11:15</b>	<b>11:30 to 1</b>	<b>1:45 – 3:15</b>	<b>3:30 - 5</b>
<b>Day-1 21<sup>st</sup> Nov 2022</b>	Inaugural Session	Introduction to Data Quality and Principles of Data Science	Data Pre-Processing	Introduction to Data Visualization Tools with examples
	<b>10:00 to 11:30</b>	<b>11:45 to 1:15</b>	<b>1:45 to 3:15</b>	<b>3:30 to 5</b>
<b>Day-2 22<sup>nd</sup> Nov 2022</b>	Data Visualization Tools (contd...)	Data Visualization Tools (contd...)	Predictive Analytics With Special Regression Models including examples	Predictive Analytics With Special Regression Models including examples
<b>Day-3 23<sup>rd</sup> Nov 2022</b>	Introduction to Decision Making with preliminary tools	Introduction to Design of Experiment, and Response Surface Methodology	Introduction to Multi Criteria Decision Making and useful techniques	Desirability Optimization and, Introduction to Evolutionary Optimization
<b>Day-4 24<sup>th</sup> Nov 2022</b>	Time Series Analysis in R- Part I	Time Series Analysis in R – Part II	Simulation and its applications	Thought Processing and Analysis
<b>Day-5 25<sup>th</sup> Nov 2022</b>	Factor Analysis: Exploratory and Confirmatory	Structured Equation Modelling	Valedictory Session	

Prof. Prasun Das, Prof. Nandini Das and Prof. Abhijeet Gupta of Indian Statistical Institute and Prof. Kishore K. Das of Gauhati University were the resource persons of the FDP. Dr. Rama Shanker and Prof. Dibyojyoti Bhattacharjee were the two in house resource persons. Prof. Dibyojyoti Bhattacharjee of the Department of Statistics was the coordinator of the event and from ISI, Prof. Prasun Das took up the responsibility.



*Resource Persons of the FDP in one frame*

As many as 40 participants from different parts of the country attended the event. Feedback was taken from the participants about the overall quality of the FDP (Management aspect and academic contents) and also on the performance of the Resource Persons. The result was later compiled and information was sent to the resource persons. The coordinator took a note of the feedback related to the management aspect so that the improvement can be made in the upcoming programs.

Name	Designation	University/ College/Institute to which Affiliated	Department
Diwakar Kumar	Associate Professor	Assam University	Microbiology
Bireshwar Bhattacharjee	Ph D Scholar	Assam University	Statistics
Indu Sharma	Assistant Professor	Assam University	Microbiology
Sibasish Dhibar	Ph D Scholar	Indian Institute of Technology Roorkee, Roorkee	Mathematics
Anadya Prakash Tripathi	Ph D Scholar	Assam University Silchar	Statistics
Rupjyoti Bordoloi	Assistant Professor	Rabindranath Tagore University, Hojai Assam	Economics
Avinash Sarin Saxena	Assistant Professor	Veer Kunwar Singh College of Agriculture, Dumraon, Buxar(Bihar)	Soil Science & Agricultural University
Shraddha Karki Chetry	Ph D Scholar	North Eastern Hill	Management

<b>Name</b>	<b>Designation</b>	<b>University/ College/Institute to which Affiliated</b>	<b>Department</b>
		University	
Adesh Sanjay Bakale	Student	Sant Gadge Baba Amravati University, Amravati	Post Graduate Teaching Department of Statistics
Mantu Kakati	Assistant Professor	Assam University, Thong Nokbe College.	Economics
Aditi Pandey	Assistant Professor	University Of Allahabad	Economics
Winee Saikia	Ph D Scholar	North-Eastern Hill University, Tura Campus, Meghalaya	Management
Sunita Das	Ph D Scholar	Assam University, Silchar.	Political Science
Sangeeta Goala	Ph D Scholar	Assam University	Statistics
Chandra Saha Roy	Ph D Scholar	Tripura University	Economics
Pubali Das	Ph D Scholar	Tripura University	Economics
Subham Roy	Student	Assam University	Statistics
Anirban Dutta	Ph D Scholar	Assam University	Statistics
Tanusree Deb Roy	Assistant Professor	Assam University, Silchar	Statistics
Jonali Gogoi	Assistant Professor	Assam University, Silchar	Statistics
Nirupam Choudhury	Student	Assam University	Business Administration
Anulekha Bhagawati	Ph D Scholar	North-Eastern Hill University, Tura Campus, Meghalaya	Management
Punam Chanda	Ph D Scholar	Tripura University	Economics
Dipanjali Ray	Ph D Scholar	Assam University, Silchar	Statistics
Gitanjali Pradhani	Ph D Scholar	Assam University, Silchar	Statistics
Joy Deb	Student	Assam University	Statistics
Mousumi Ray	Ph D Scholar	Assam University	Statistics
Suvam Sarmacharjee	Ph D Scholar	Assam University	Business Administration

Name	Designation	University/ College/Institute to which Affiliated	Department
Mehuly Chakraborty	Student	University of Engineering and Management, Kolkata	Department of Computer Science & Engineering
Kimneithem Kipgen	Ph D Scholar	Tripura University	Economics
Anasua Dutta	Student	Christ University	Statistics
Amalesh Adhikary	Ph D Scholar	Assam University	Social Work

The valedictory session was chaired by the Dean of the School of Physical Sciences, Prof. C R Bhattacharjee and he also delivered the valedictory address. He was full of praise for the Department and thanked the department for organizing the FDP on such a relevant theme that too in collaboration with the Indian Statistical Institute. He urged that the department should organize several such events in future.



*Group Photograph of the organizers and the participants in the Valedictory Session*

The participants of the FDP whole heartedly expressed their satisfaction about the contents, management, food, resource persons and academic deliberations. They expressed that they shall be eager to join several other such FDPs in future as and when conducted by the department.

The Vote of thanks of the workshop was delivered by Dr. Tanusree Deb Roy, Assistant Professor of the Department, who whole heartedly thanked the CoE of Assam University who conceived the idea of conducting the event and initiated the matter with the Indian Statistical Institute. She also thanked the administration of both the organizing institutes, Vice Chancellor of Assam University and Director of ISI for permitting the event, all resource persons, and participants, HoD, Coordinators, Research Scholars, Faculty Members and all relevant service providers.

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