Centurion University of Technology and Management, Paralakhemundi, Odisha

5-Days National Training Program on

Research Data Analysis using R Programming

[22nd - 26th April, 24]

Organized By

Department of Agricultural Economics and Statistics

&

Centre for Data Science and Machine Learning

Centurion University of Technology and Management

Odisha- 761211, India

Training Report

The training program aims to provide a comprehensive background on the basic principles and applications of statistical data analysis using R software. Main characteristic feature of the Programme would-be hands-on training with uses of R statistical software preceded by the theoretical aspects in diverse fields of study. This program provides an opportunity to understand the crux of research methodology in the light of inherent use of statistics in conduction of any type of research. The focus on interpretation as well as computation develops competencies that will aid participants in their future careers as researchers.

The Programme was coordinated by Dr. Soumik Ray and Dr. Tufleuddin Biswas, assistant professor, department of Agricultural Economics and Statistics, CUTM.

The programme was organized by Department of Agricultural Economics and Statistics in Collaboration with Centre for Data Science and Machine Learning (DSML), Centurion University of Technology and Management, Odisha, India. A detail of the programme is mentioned below.

The Programme was held on April 22-26th, 2024.

Topic covered:

1. An introduction of R- Software. Data visualisation and descriptive statistics for research methodology.
2. Correlation and Regression analysis in R software.
3. MANOVA and Cluster analysis using R software.
4. Design of Experiment (Hand-on practice on R software).
5. Bibliometric analysis.
6. Principal Component analysis and Factor analysis using R software.

Total Registered: 92
Faculty participants: 14
Research Scholar & Student participants: 78

Centurion University of Technology and Management, Paralakhemundi, Odisha

We, Dr. Soumik Ray and Dr. Tufleuddin Biswas, the program's coordinators, would like to express our gratitude to Dr. S. P. Nanda, the dean of administration, and Dr. M. Devender Reddy, the dean of academics, for all of their support and assistance from the beginning to the completion of the program. We also acknowledge Dr. Prafulla Kumar Panda, the research coordinator for the Centre for Data Science and Machine Learning, for his unwavering support of the program's success. We also applaud to Dr. Idemakanti Chandrakanth Reddy and Dr. Saddam Hossen Majumder (Agricultural Economics), department of Agricultural Economics and Statistics for their continuous support to organize the programme.

We acknowledge our esteemed guest speakers, Dr. Akhilesh Kumar Gupta, Dr. Nitin Varshney, Dr. P. Dinesh Kumar, Dr. Manoj Kanti Debnath, Dr. Priyanka Lal, Dr. Pradip Basak generously shared their expertise and insights in this program.

We would like to extend our sincere thanks to Vice-Chancellor, CUTM, Dr. Supriya Pattanayak, registrar CUTM, Dr. Anita Patra, and Vice president, CUTM, Prof. D. N. Rao, for their support in making this program possible on behalf of the department of Agricultural Economics and Statistics and the Centre for Data Science and Machine Learning.

Program Schedule

5-Days National Training Program on

Research Data Analysis using R Programming

[22nd - 26th April, 24]

Organized By

Department of Agricultural Economics and Statistics

&

Centre for Data Science and Machine Learning

Centurion University of Technology and Management

Odisha- 761211, India

Speaker's Name	Topic	Time and Date
Inauguration Program		2.45 PM to 3.30 PM and 22.04.2024 (Monday)
Dr. Akhilesh Kumar Gupta, Assistant Professor, Department of Agricultural Statistics, College of Agriculture, OUAT, Bhubaneswar-751003	An introduction of R- Software. Data visualisation and descriptive statistics for research methodology.	3.30 PM to 6.00 PM and 22.04.2024 (Monday)
Dr. Nitin Varshney Assistant Professor Department of Agricultural Statistics, N.M. College of Agriculture, Navsari Agricultural University, Navsari, Gujarat-396450	Correlation and Regression analysis in R software.	3.00 PM to 4.30 PM and 23.04.2024 (Tuesday)

Dr. P. Dinesh Kumar Assistant Professor, Division of Agricultural Economics, School of Agricultural Sciences, Karunya Institute of Technology and Sciences, Coimbatore 641114	MANOVA and Cluster analysis using R software	4.30 PM to 6.00 PM and 23.04.2024 (Tuesday)
Dr. Manoj Kanti Debnath Assistant Professor Department of Agricultural Statistics Uttar Banga Krishi Viswavidyalaya, Cooch Behar, West Bengal-736165	Design of Experiment (Hand-on practice on R software).	3.00 PM to 6.00 PM and 24.04.2024 (Wednesday)
Dr. Priyanka Lal Assistant Professor School of Agriculture Lovely Professional University, Phagwara Punjab	Bibliometric analysis	3.00 PM to 5.00 PM and 25.04.2024 (Thursday)
Dr. Pradip Basak Assistant Professor Department of Agricultural Statistics Uttar Banga Krishi Viswavidyalaya, Cooch Behar, West Bengal-736165	Principle Component analysis and Factor analysis using R software	3.00 PM to 5.00 PM and 26.04.2024 (Friday)
Valedictory Program		5.00 PM to 5.30 PM and 26.04.2024 (Friday)

About the resource Persons

1. **Dr. Akhilesh Kumar Gupta** is an Assistant professor in the Department of Agricultural Statistics, College of Agriculture, OUAT Bhubaneswar. He joined as assistant professor in 2021. He has received his Master's degree in Agricultural Statistics with University silver medal from IGKV, Raipur and received PhD in Agricultural Statistics from Visva-Bharati, Shantiniketan. His research and teaching expertise includes Statistical Modelling, Time Series Modelling, Machine Learning and Experimental Design. He has several research papers and book chapters in reputed national and international journals in the area of statistical modelling, machine learning, regression and design.

2. **Dr. Nitin Varshney** possesses the degree of M.Sc. & Ph.D. (Agricultural Statistics) from ICAR-IASRI, New Delhi. Currently, he is working as an Assistant Professor in the Department of Agricultural Statistics, N. M. College of Agriculture, Navsari Agricultural University, Navsari, Gujarat. Dr. Varshney has actively contributed to teaching, research, and providing statistical assistance to research students and scientists. He has authored numerous research papers that have been published in prestigious national and international journals. He has also authored two books and several book chapters. With 5 years of experience, he brings valuable expertise to his field.

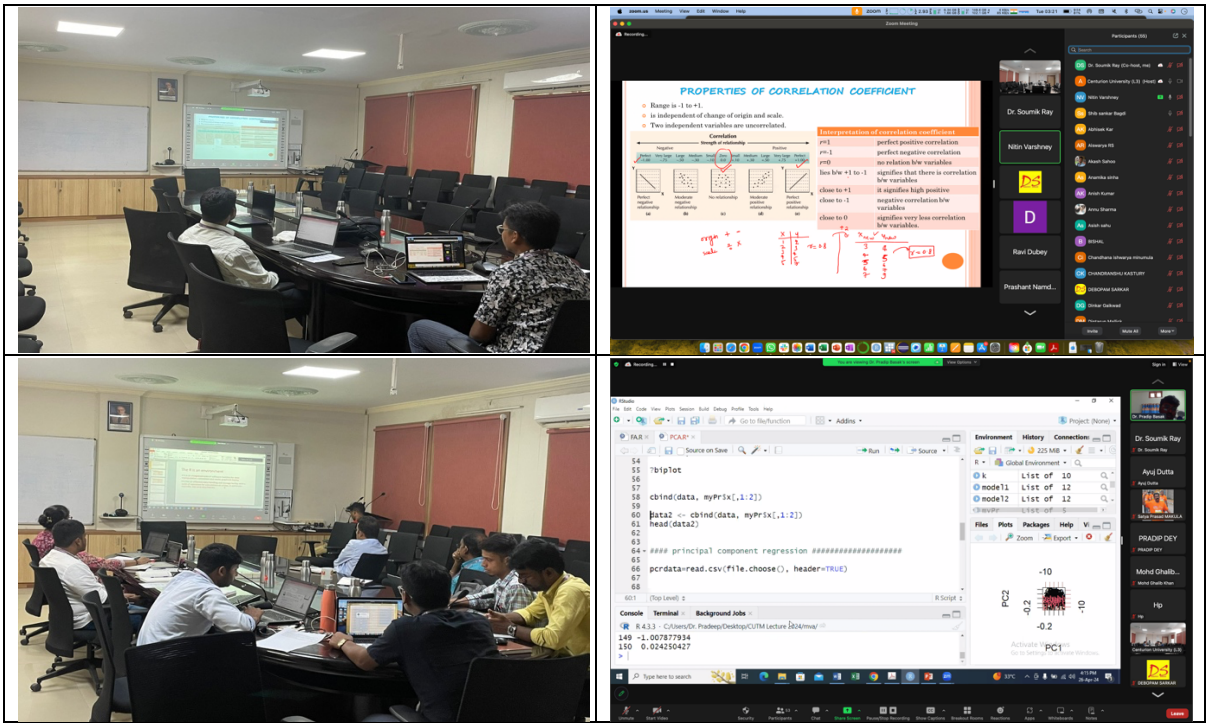
3. **Dr. Dinesh Kumar P**'s academic journey is marked by unwavering dedication and excellence. Graduating from Tamil Nadu Agricultural University, Coimbatore, he laid the groundwork for his career in agricultural statistics. His pursuit of knowledge led him to excel in his Master's at the University of Agricultural Sciences, Bangalore, earning him recognition and a prestigious National Talent fellowship from ICAR. Undeterred by challenges, he pursued a PhD at Bidhan Chandra Krishi Viswavidyalaya, Kolkata, specializing in advanced techniques like machine learning and stochastic modeling. Currently, as an Assistant Professor at Karunya University, Coimbatore, he imparts his expertise in statistical methods and data analysis, contributing significantly to agricultural research. Dinesh's journey embodies perseverance and a quest for knowledge, making him a valuable asset in the field. Let's welcome him warmly and embrace the opportunity to learn from his wealth of experience.

4. **Dr. Manoj Kanti Debnath** possesses the degree of Ph.D. in Agricultural Statistics from Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, West Bengal, India. Currently, he is working as an Assistant Professor in the Department of Agricultural Statistics in Uttar Banga Krishi Viswavidyalaya, Coochbehar, West Bengal, India. Dr. Debnath has actively contributed to teaching, research, and providing statistical assistance to research students and scientists. He is contributing his expertise on 6 different university projects as Co-Principle Investigator. He also acted as resourse person in several workshop and training program organized by prestigious universities and organizations. Dr. Debnath has authored numerous research papers that have been published in prestigious national and international journals. With 11 years of experience in research and teaching, he brings valuable expertise to his field.

5. **Dr. Priyanka Lal** possesses the degree of Ph.D. in Agricultural Economics from ICAR-National Dairy Research Institute, Karnal, Haryana, India. Currently, she is working as an Assistant Professor in the Department of Agricultural Economics in Lovely Professional University, Jalandhar, Punjab, India. Dr. Lal has actively contributed to teaching, research, and providing significant assistance to the researcher and scientists. She has authored several research papers that have been published in prestigious national and international journals. With 4 years journay of research and 3 years journay of teaching, she brings valuable expertise to her field.

6. **Dr. Pradip Basak** possesses the degree of Ph.D. in Agricultural Statistics from ICAR-IASRI, New Delhi, India. He had awarded M. K. Bose award for being the best student in Ph.D. (Agricultural Statistics) at ICAR-IASRI during 2013-2016. Currently, he is working as an Assistant Professor in the Department of Agricultural Statistics in Uttar Banga Krishi Viswavidyalaya, Coochbahar, India. His area of specialization is Sample survey, small area estimation and Multivariate Analysis. He has handled several external funded projects as a PI and Co-PI. Dr. Basak has actively contributed to teaching, research, and providing significant assistance to the researcher and scientists. He has authored several research papers that have been published in prestigious national and international journals. With 4 years journay of research and 4 years journay of teaching, he brings valuable expertise to her field.

Some photos of the training Programme



Centurion University of Technology and Management, Paralakhemundi, Odisha