





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

**Report of the Blended Online 7-Days Training Program on Statistical Analysis
using R Programming
24th November to 1st December, 2020**

The Department of Statistics, Assam University in collaboration with National Institute of Electronics and Information Technology, Guwahati organized the blended online seven-days training program on Statistical Data Analysis Using R Programming from 24th November, 2020 to 1st December, 2020. The organizers of the training program was Dr. Tanusree Deb Roy, Assistant Professor, Department of Statistics, Assam University, Silchar, Mr. Prankrishna Tamooli, Sc-B & Centre in Charge, NEILIT Jorhat EC of Guwahati, Jorhat, Assam and Dr. Saurav Mahanta, STO, NIELIT Guwahati, Assam.

Statistical analysis has multiple facets and it encompasses a variety of techniques, which is being used in different domains of research such as science, humanities, management, commerce, engineering etc. Presently, one of the most popular statistical analysis software for researchers in science is R programming language. R is a programming language that is designed and used mainly in the statistics, data science, and scientific communities. R has “become the de-facto standard for writing statistical software among statisticians and has made substantial inroads in the social and behavioral sciences”. With this view, the training program was organized for the greater benefit of all. The brochure of the training program is included below:

<p>BLENDED ONLINE 7-DAYS TRAINING PROGRAM ON “Statistical Analysis using R programming” NOVEMBER 24th- DECEMBER 1st, 2020</p> <p>Organized by</p>  <p>Department of Statistics, Assam University, Assam</p> <p>In collaboration with</p>  <p>NIELIT National Institute of Electronics and Information Technology Government of India</p>	<p>INVITATION Dear Participants It is hereby informed that, Dept. of Statistics, Assam University, Assam is going to organize online 7-days Training Program on “Statistical Analysis using R programming” in collaboration with National Institute of Electronics & Information Technology, (NIELIT), Jorhat Extension Centre, from 24th November to 1st December, 2020. Statistical analysis has multiple facets and it encompasses a variety of techniques, which is being used in different domains of research such as science, humanities, management, commerce, engineering etc. Presently, one of the most popular statistical analysis software for researchers in science is R programming language. R is a programming language that is designed and used mainly in the statistics, data science, and scientific communities. R has “become the de-facto standard for writing statistical software among statisticians and has made substantial inroads in the social and behavioral sciences”. With this view, we are organizing this training program for the greater benefit of all. Your active participation will make this event successful.</p> <p>ELIGIBILITY FOR PARTICIPATION Any students and research scholars/Faculty members who have prior idea about computer programming and are in need of learning data analysis through R programming language are eligible to apply in the training program.</p>	<p>REGISTRATION Registration is free.</p> <p>HOW TO APPLY Applicants can enroll themselves by filling and submitting Google form online in the following link: https://forms.gle/8m3CQ9m9Vn6Gd4r</p> <p>SELECTION OF THE PARTICIPANTS Participants for the program will be selected on the first come first serve basis. Limited Seats are available. A confirmation mail will be sent to the selected participants.</p> <p>**LAST DATE OF REGISTRATION, NOVEMBER 22, 2020 TILL 10 P.M.**</p> <p>ABOUT ASSAM UNIVERSITY, SILCHAR, ASSAM Assam University came into existence in 1994 after enactment of the Assam (Central) University Act 1989. Through its pursuit, Assam University is in the process of making itself an institute of excellence. Assam University main campus is situated at Dergaona, about 20 kms away from Silchar. The campus is set amidst sprawling hillocks and typical landscape of north east. The campus is spread over 600 acres and provides an ideal environment for the researchers, students and the people interested in academic excellence.</p>	<p>The other campus of the university is situated at Diphu in the district of Karbi Angong, Assam. The university has the territorial jurisdiction over the five districts of Assam viz., Cachar, Karimganj, Nalbari, Dima Hasao (erstwhile North Cachar Hill) and Karbi Angong.</p> <p>Assam University being a central university hosts a national characteristics of unity in diversity. Faculties, staff and students hail from all over the country.</p> <p>ABOUT NIELIT JORHAT EXTENSION CENTRE National Institute of Electronics & Information Technology (NIELIT), Jorhat Extension Centre is one of the presently prevailed 3 extension centre (Tezpur, Jorhat, Dibrugarh, Silchar, Jorhat) of NIELIT Guwahati (besides Guwahati City Centre, Majuli Study Centre), which is an autonomous scientific society under the Ministry of Electronics & Information Technology (MeitY), Government of India.</p> <p>RESOURCE PERSONS:</p> <ul style="list-style-type: none"> Dr. Chiranjyoti Bhattacharjee, Professor, Department of Statistics, Assam University Mr. Joydipoy Deka, IT Faculty, Jorhat Extension center of NIELIT Guwahati, Assam 	<p>REGISTRATION LINK: Interested participants are requested to register through the registration link: https://forms.gle/8m3CQ9m9Vn6Gd4r</p> <p>ORGANIZING COMMITTEE</p> <p>Advisor: Dr. V Jayanta Singh, Director, NIELIT Guwahati, Assam & Shillong, Meghalaya.</p> <p>Chairman: Dr. Rama Shankar, HoD & Associate Professor, Department of Statistics, Assam University, Silchar</p> <p>Coordinator: Dr. Tanusree Deb Roy, Assistant Professor, Department of Statistics, Assam University, Silchar</p> <p>Mr. Prankrishna Tamooli, Sc-B & Centre in Charge, NIELIT Jorhat EC of Guwahati, Jorhat, Assam</p> <p>Dr. Saurav Mahanta, STO, NIELIT Guwahati, Assam</p> <p>Contact: For any queries, please mail us at the email id: stat@assamuni.ac.in</p>	<p>RULES AND REGULATIONS</p> <p>Training mode and software to be used Training will be conducted through Cisco WebEx (www.webex.com) and participants needs to install Cisco WebEx Meetings in their PCs, smart phones, tablets. Required instructions for installing Cisco WebEx Meetings will be provided prior to the commencement of the program.</p> <p>Daily online classes will be of 2 hours duration from 3 PM to 5 PM with a break of 10 minutes.</p> <p>Assignment & attendance Daily assignment will be provided in form of quiz in the Google Classroom and on Saturday & Sunday practical assignments will be provided, which every participant has to submit. Daily assignment submission will also be considered as attendance including Saturday and Sunday.</p> <p>Feedback Each participant must submit a feedback report on the last day of the program.</p> <p>Certification All the registered participants will be issued an e-certificate of participation subject to attendance of 60% of the blended sessions.</p>
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In the training program renowned statistician and faculty member from Department of Statistics, Assam University, Silchar Prof. Dibyojyoti Bhattacharjee, Mr. Jyotirmoy Deka, IT Faculty, Jorhat Extension center of NIELIT Guwahati, Assam and Dr. Tanusree Deb Roy, Assistant Professor, Department of Statistics, Assam University, Silchar were the resource persons. The Event was conducted online in Cisco Webex. The registration for participating in the training program was <https://forms.gle/N8TGD56nyRVuBQ4v7>. The schedule of the training program is included below:



Blended online
7-days training program on
"Statistical Analysis using R Programming"



Organized by
Assam University, Silchar, Assam
In collaboration with
National Institute of Electronics & Information Technology, (NIELIT) Guwahati
Date- 24-11-2020 to 01-12-2020

Day	Date	Time	CONTENTS
1	24-11-2020 Tuesday	Session-1 3 PM – 3.50 PM	Inaugural Session – Keynote speech and Introductory speech.
		Session-2 4. PM – 5 PM (Jyotirmoy Deka)	Basics of R programming part-1 Brief history of R programming and applications Basic of R (Variables and Data Types) Installation of R studio
2	25-11-2020 Wednesday	Session-1 3 PM – 3.50 PM (Jyotirmoy Deka)	Basics of R programming part-2 Operators and Conditional Statements Strings in R and Functions
		Session-2 4 PM – 5 PM (Jyotirmoy Deka)	Basics of R programming part-3 Lops in R File Handling
3	26-11-2020 Thursday	Session-1 3 PM – 4 PM (Tanusree Deb Roy)	Build in library functions, List and data frames, Basic Descriptive Statistics in R, generating one-way and two-way frequency tables in R, Probability distributions, simulation from common probability distributions with applications in R
		Session-2 4.10 PM – 5 PM (Dibyojyoti Bhattacharjee)	Statistical Graphics Simple graphs- bar, pie, line, scatter, histogram, Q-Q plot, empirical cdf and box plot in R
4	27-11-2020 Friday	Session-1 3 PM – 4 PM (Dibyojyoti Bhattacharjee)	Parametric Tests of Significance z test for proportion and mean, t-tests, F-test, chi-square test and ANOVA in R
		Session-2 4.10 PM – 5 PM (Dibyojyoti Bhattacharjee)	Non-parametric Tests Sign test, Run test, Median test, K-S test, rank based ANOVA tests etc. in R
5	28-11-2020 Saturday		Assignments
6	29-11-2020 Sunday		Assignments
	30-11-2020 Sunday		Holiday
7	01-12-2020 Tuesday	Session-1 3 PM – 4 PM (Dibyojyoti Bhattacharjee)	Regression Linear and non-liner curve fitting in R- computation of residuals, testing goodness-of-fitted regression, Multiple Regression
		Session-2 4.10 PM – 5 PM	Feedback and Valedictory Session.

The registration fee of the blended online training program was free of cost. The participants included Professionals and students from NIELIT, persons from medical colleges, Professionals and students from different Institutions all over India, Assistant Professors from Universities and Colleges, Research Scholars, Passed out PG Students and also students who are persuing their Masters. Two hundred participants registered for participating in the training program.

The event started at 3 PM on 24th November, 2020 with a brief introduction about the training program by Dr. Tanusree Deb Roy, Assistant Professor, Department of Statistics, Assam University, Silchar. Head of the Department of Statistics, Assam University, Silchar Dr. Rama Shanker welcomed the participants and briefed in detail on Department of Statistics, Assam University, Silchar. Dr. Y. Jayanta Singh, Director, NIELIT Guwahati and Shillong gave the inaugural speech. A brief introduction about NIELIT was given by Mr. Prankrishna Tamooli, Sc-B & Centre in Charge, NEILIT Jorhat EC of Guwahati, Jorhat, Assam. The session ended with the vote of thanks by one of the coordinator of the event Dr. Saurav Mahanta, STO, NIELIT Guwahati, Assam.

There was daily online classes of 2 hours duration from 3 PM to 5 PM with a break of 10 minutes. Daily assignment was provided in form of quiz in the Google Classroom and on Saturday & Sunday practical assignments was provided, which every participant submitted. Daily assignment submission was considered as attendance including Saturday and Sunday.

First class on R started at 4 PM on 24th of November by Mr. Jyotirmoy Deka, IT Faculty, Jorhat Extension center of NIELIT Guwahati, Assam on Basics of R programming part-I. In the second day of the training program 25th of November, 2020 Mr. Deka continued with his lectures on Basics of R programming part-II and part-III.

On the third day of the training program Dr. Tanusree Deb Roy, Assistant Professor, Department of Statistics, Assam University, Silchar and one of the coordinators of the event delivered lecture on Basic Statistical Analysis using R programming.

In the same day of the event Prof. Dibyojyoti Bhattacharjee, Faculty member from Department of Statistics, Assam University, Silchar gave lecture on Statistical Graphics using R program.

On 27th of November, 2020 Prof. Bhattacharjee delivered lectures on Parametric Tests of Significance and Non-parametric tests using R program which was applauded by the participants of the program.

28th and 29th of November, 2020 being Saturday and Sunday practical assignments was provided, which every participant submitted. 30th of November, 2020 declared as central holiday no classes were arranged on that day.

On the last day of the training program on 1st of December, 2020 from 3 PM to 4 PM Prof. Dibyojyoti Bhattacharjee gave lecture on Correlation and Regression using R program which was the last class on R. The Valedictory Session of the training program started at 4:10 PM. Dr. Tanusree Deb Roy, Assistant Professor, Department of Statistics, Assam University, Silchar thanks on the participants for participating in the training program which resulted in successful completion of the event. The participants expressed their opinions in the valedictory session. They expressed that they gained knowledge on R program from the lectures of the speakers who delivered their lectures in the training program. Some of them even requested if the program on R could be arranged in advance level. Prof. Dibyojyoti Bhattacharjee, Faculty member from Department of Statistics, Assam University, Silchar expressed his satisfaction over the organization of the event. Mr. Manab Kalita Assistant Director NELIT Guwahati and Centre In Charge NIELIT, Silchar was also present during the valedictory session. Mr. Kalita conveyed such platform facilitates everyone to enhance ones knowledge in the programming software R. Dr. Saurav Mahanta, STO, NIELIT Guwahati, Assam and Mr. Jyotirmoy Deka, IT Faculty, Jorhat Extension center of NIELIT Guwahati, Assam expressed their satisfaction and thanked the participants in the successful completion of the training program. The Valedictory speech was given by Dr. Rama Shanker, Head, Department of Statistics, Assam University, Silchar. Sir thanked one and all who contributed towards the successful completion of the event. Prof. Dibyojyoti Bhattacharjee, Faculty member from Department of Statistics, Assam University, Silchar thanked the participant for participating in the training program who have successfully contributed towards the successful running of the program. Finally the valedictory session came to an end with the vote of thanks given by Mr. Prankrishna Tamooli, Sc-B & Centre in Charge, NEILIT Jorhat EC of Guwahati, Jorhat, Assam.

Some screenshot of the event are provided below.

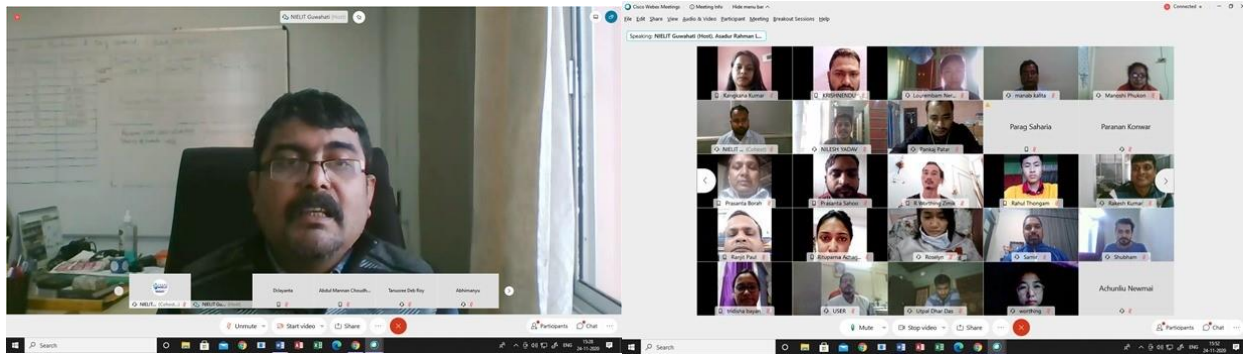
Prof. Y. Jayanta Singh delivering during the Inaugural Session

Dr. Rama Shanker addressing during the Inaugural Session



Mr. Prankrishna Tamooli delivering during the Inaugural Session

Participants of the Event



Participants of the Event

Prof. Dibyojyoti Bhattacharji delivering during the session

