# DEPARTMENT OF MATHEMATICS, RAJIV GANDHI UNIVERSITY, RONO HILLS, DOIMUKH, ARUNACHAL PRADESH

## STUDENT DEVELOPMENT PROGRAMME
### On
## BASICS OF R-PROGRAMMING
### (23rd - 29th September, 2021)

## REPORT

The Department of Mathematics, Rajiv Gandhi University organized an **ONLINE STUDENT DEVELOPMENT PROGRAMME** on **"BASICS OF R PROGRAMMING"** for students during 23-29 September, 2021. The programme was organized in collaboration with Spoken Tutorial Project, IIT Bombay. The workshop was specifically meant for students of colleges and universities, and research scholars. The main objective of this workshop was to impart basic knowledge of R Programming language and to strengthen the technical skills of the students for research and career enhancement.

## PARTICIPANTS

There was a good response from the Students and Scholars of Rajiv Gandhi University.

| Sl. No. | Name of Participants |
|---------|----------------------|
| 1. | Nabam Rikam |
| 2. | Basit Rrahman |
| 3. | Rubu Nikang |
| 4. | Samcha Hangphuk |
| 5. | Ha Yata |
| 6. | Crescent Khatsin |
| 7. | Dawadorjee Sona |
| 8. | Sili Doyom |
| 9. | Bhuban Chandra Deuri |
| 10. | Rinchin Drema |
| 11. | Sode Kakki |
| 12. | Onima Nyising |
| 13. | Pranjit Borah |
| 14. | Drema Naksang |
| 15. | Yaya Modi |
| 16. | Eny Tayang |
| 17. | Ranjan Chetry |
| 18. | Rusick Bimpak |
| 19. | Jumki Bui |
| 20. | Banashree Khanikar |
| 21. | Minkar Loyi |
| 22. | Tarh Agu |
| 23. | Kero Maling |

| 24. | Pane Natung |
|-----|-------------|
| 25. | Dipali Ttanti |
| 26. | Joram Daniel |
| 27. | Taw Yame |

## SESSIONS

The workshop was carried out in online distance education mode which is highly conducive for the participants to learn from their own residence. The workshop had altogether 20 video lecture sessions. The sessions were delivered via video lessons created by Spoken Tutorial team. The lessons covered all the basic topics in R Programming. The lessons were very thoroughly presented with the help of hands-on programs. The presented lessons were followed by a series of assignments, based on the topics taught.

An online test on R Programming was also conducted for those participants who were willing to appear for one.

## OUTCOMES

The participants showed positive response toward the SDP. They actively participated in the sessions and submitted their assignments before due date. Further, most of the participants also turned up for attempting the online R-test, remotely conducted by IIT Bombay, though the test was not mandatory. A training completion certificate was given to all the successful participants of the test by Spoken Tutorial Project, IIT Bombay.

## CONCLUSION

The workshop was beneficial to all the participants. All the participants were provided with a Participation certificate by the organizers.

The workshop initiated by Department of Mathematics, Rajiv Gandhi University was made possible due to the online repository of knowledge created by Spoken Tutorial. Such online repository is tremendously advantageous in the current times of COVID-19 pandemic, when there is a push toward online learning and teaching. Several educational institutions can benefit from ready-made video lessons thereby making it easier to conduct online classes. In addition to video lessons Spoken Tutorial has also been helpful in conducting tests and distribution of Certificates for participation.

**Convener**
Dr. Nipen Saikia
Associate Professor
Department of Mathematics
Rajiv Gandhi University.

**Secretary**
Mrs. Dakjum Eshi
Assistant Professor
Department of Mathematics
Rajiv Gandhi University

## PROGRAMME SCHEDULE

| Day | 10 am-11 am | 11.30am-12.30 pm | | 2.30 pm- 3.30 pm |
|---|---|---|---|---|
| Day 1 | Overview of R and R-Studio | Installing R and R-Studio | B | Introduction to Basics of R |
| Day 2 | Introduction to Data Frames in R | Introduction to R studio | R | Introduction to R script |
| Day 3 | Working Directories in RStudio | Indexing and Slicing Data Frames | E | Creating Matrices using Data Frames |
| Day 4 | Merging and Importing Data | Data types and Factors | A | Lists and its Operations |
| Day 5 | Plotting Histograms and Pie Chart | Plotting Bar, Charts and Scatter Plot | K | Introduction to ggplot2 |
| Day 6 | Aesthetic Mapping in ggplot2 | Data manipulation using Dplyr Package | | More Functions in dplyr Package |
| Day 7 | Pipe Operator | Conditional Statements | | Functions in R |