

# One Week National Workshop on **Research Data and Statistical Analysis using R Programming**

06<sup>th</sup> – 11<sup>th</sup> May, 2019



Information and Library Network Centre  
Gandhinagar, Gujarat

## About INFLIBNET

The Information and Library Network (INFLIBNET) Centre is an autonomous Inter-University Centre (IUC) of the University Grants Commission (UGC) located in the Infocity, Gandhinagar. Major activities and services of the Centre are geared towards modernization of academic libraries and information centres, promotion of information transfer and access, support scholarship, learning and academic pursuits. The Centre acts as a nodal agency for networking of libraries and information centres in universities, institutions of higher learning and R & D institutions in India. The Centre was established as an independent autonomous Inter-University Centre of the UGC in May 1996 and set out to be a major player for promoting scholarly communication among academicians and researchers across the country.

The technology being a driving force in the contemporary education system, the Centre has taken-up a number of initiatives for the benefit of the academic community in India. These initiatives include i) IndCat, a unified online catalogue of books, theses and journals available in major university libraries in India; ii) SOUL 2.0, state-of-the-art integrated library management software; iii) e-Shodh Sindhu for extending access to selected scholarly electronic journals and databases to eligible universities, centrally-funded technical institutions and colleges in different disciplines; iv) Shodhganga for enabling online submission of doctoral theses and dissertations by research scholars in an open access digital repository; v) Shodhgangotri for facilitating research scholars to submit approved synopsis of research proposals submitted to their universities; vi) Open Journals Access System (OJAS) to facilitate faculty and researchers in Indian universities to launch their open access journals on OJAS platform; vii) InfoPort: INFLIBNET's Subject Gateway for Indian Electronic Resources; viii) e-PG Pathshala, a project assigned to the UGC by NME-ICT, wherein e-content are being developed in 77 subjects at postgraduate level; ix) VIDWAN, a premier database of profiles of scientists and faculty members working in leading academic institutions and other R & D organisations involved in teaching and research in India; x) e-Acharya - an Integrated e-content portal: a web-based portal consisting of all e-content with funding from NME-ICT, MHRD; xi) ICSSR Data Service: Social Science Data Repository for setting up of repository and hosting of NSS and ASI datasets into the data repository; and xii) National Institutional Ranking Framework (NIRF), a project assigned by MHRD for ranking institutions of higher education across the country.

## Objectives of the Workshop

The significance of Data and its effective analysis is unavoidable to have a good piece of research and to make a fruitful decision. From students to scholars, individual researchers to research institutes throughout the world come across this data analysis part to carry out their research. Statistics and statistical analysis plays a crucial role in research and analyzing data. The aim of this workshop is to provide hands on training in understanding the concepts in data science and statistical analysis using R programming which is one of the most widely used open source package in the field of Data Science across the world. This workshop will help the participants in applying proper research methodology and improving their analysis by applying various statistical techniques using R programming.

At the end of the workshop, participants should be able to :

- » Get familiar with R programming language;
- » Understand statistical analysis using R programming;
- » Explore how to analyze research data using R programming;
- » Explore how to represent data using basic graphs in R; and
- » How to prepare presentation, document, web pages, blogs in R.

## Major Topics

The Scope of workshop is to cover theoretical discussion and practical exposure on the following aspects of statistical analysis using R

- » Introduction to R, Rstudio;
- » Data types in R;
- » Importing and handling data in R;
- » Working with functions in R;
- » Exploratory Data Analysis using R (Data Visualization);
- » Descriptive Statistics (summary Measures) using R;
- » Hypothesis Testing – I (Parametric);
- » Hypothesis Testing – II (Non-Parametric);
- » Analysis of Variance (One way ANOVA, Two way ANOVA);
- » Simple and Multiple Linear Regression Analysis;
- » Logistic Regression;
- » Time Series Analysis;
- » Reproducible Research using R and Rstudio (knitr, rmarkdown, bookdown); and
- » Website and Blog Management using R and Rstudio.

## Resource Persons

The resource persons are prominent statisticians / scientists / professors / researchers / scholars in the field of statistics and data science across the country. They have an extensive experience with the application of statistical analysis in a research evaluation.

## Target Participants

Academicians, Faculties, Current and Prospective Research Scholars, PG Students and UG Students from all disciplines. A maximum of 25-30 candidates will be selected for the training programme on First-Come-First-Serve basis.

**Duration:** One Week (06<sup>th</sup> - 11<sup>th</sup> May, 2019)

One week workshop includes all hands on practical sessions, Case Studies, Discussion Forum, Group Presentation.

## Venue

The Workshop will be conducted at Information and Library Network Centre, An IUC of University Grants Commission, Infocity, Gandhinagar-382007, Gujarat, India.

## Workshop Fee

The registration fee is Rs. 7,080.00 (Rupees Seven Thousand Eighty only) per person without accommodation and Rs. 10,810.00 (Rupees Ten Thousand Eight Hundred Ten Only) with accommodation which is inclusive of GST rates. It covers the cost of training programme kit containing training materials, breakfast, lunch and dinner during the training period. The

payment should be made through Demand Draft in favour of INFLIBNET Centre payable at Gandhinagar along with filled-in registration form. Fee is non-refundable and non-adjustable. The Centre also accepts payment by NEFT /RTGS for the workshop. The bank account details will be shared on request.

## Accommodation

The Centre will arrange accommodation during the period of training at INFLIBNET Guest House (A/C Room) on twin sharing basis. The participants must send prior intimation and charges for accommodation along with registration fees. The accommodation will be provided first come first basis.

## Registration

The application for registration to the training programme should be submitted online at <https://hrd.inflibnet.ac.in/login.php> on or before 30<sup>th</sup> April, 2019.

## How to Reach INFLIBNET

**Road Routes:** Gandhinagar is connected to Surat, Mumbai, and Navi Mumbai through National Highway 8A. It is connected to Ahmedabad, Jaipur, Udaipur, New Delhi & Chandigarh through the National Highway 8C.

**Air Connectivity:** The nearest airport is Sardar Vallabhbhai Patel International Airport, Ahmedabad located at a distance of 15KM from Domestic flights are available for the Metropolitans and other major cities of India. It also provides many International flights from Ahmedabad to across the world.

**Rail Connectivity:** The nearest Railway Station is Ahmedabad Railway Station (Known as Kalupur) which is well connected to all metropolitans and other major cities of India. The Ahmedabad Railway station is located at a distance of 23 Km from the INFLIBNET Centre, Gandhinagar.



For further information please contact

### Course Director

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### Course Co-ordinators

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For more information : <https://hrd.inflibnet.ac.in/>