

SHURPARAKA EDUCATIONAL & MEDICAL TRUST'S M. B. Harris College of Arts & A.E. Kalsekar College of Commerce and Management Nallasopara West , Maharashtra (India) NAAC ACCREDITED Affiliated to University of Mumbai Research Cell in Association with Internal Quality Assurance Cell (IQAC) PRESENTS Four Day Online National Level workshop

Introduction to Data Analysis using R

Date : 5rd to 8th August 2020 Timing:5pm to 7pm Mode: Zoom App Fees Rs.700/- For ALL



About the Resource Person Dr. Suresh Sharma

Professor, Department of Statistics, Former Coordinator, Centre for Systems Biology and Bio-informatics, Panjab University. His areas of interest include Biostatistics, Ranking and Selection, Statistical Inference, Statistical Modeling, Bioinformatics and Statistical Genetics. He has published more than 110 Research Papers in National/International Journals of repute. He has attended and delivered talks in more than 35 International conferences abroad and delivered more than 550 Invited talks in India. He has written several chapters in books. Recently, he has written a book a book on Medical Statistics which was launched by International Medical Olympiad Greece. Twelve students completed their Ph.Ds. under his guidance and 4 are enrolled at present. He has taken lots of sessions on SPSS, R and Python.

Advantages of R

R is a free, future-proof, open-source programming language that facilitates statistical computing and graphical libraries. R provides cross-platform support such as Windows, Mac, Linux, etc. It is useful for many disciplines like data science, machine learning, data visualization, etc. R is a very flexible programming language with a lot of varied applications in various sectors such as Academics, Finance, Banking, IT Sector, Manufacturing, and Social Media, etc. R is used in the real world such as Cornell University, Microsoft, Amazon, Facebook, and Bank of America, etc. The popularity of Statistical Programming language R is quickly overtaking SPSS and other "traditional" point-and-click software packages.

R is helping learners to bypass SPSS and all other paid Statistical packages altogether. This WORKSHOP is for the very beginners in the area of DATA ANALYSIS using R. It will provide a bridge from EXCEL to R. The participants are expected to have BASIC KNOWLEDGE of Statistics and Research methodology.

> To join the FDP Follow the simple steps

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Contents of R-Workshop

DAY	TOPIC
Day-I	Introduction to RM- How to select topic for research
Day- II	Downloading and installation of R and R-Studio; http://www.r-project.org Research Methodology & Basics of Statistics Introduction to R and R-Studio. Setting of working directory, Entering and manipulating data in R, Basic classes of objects (character, numeric, integer, complex, logical), Vectors and their attributes (names, length, type), Arrays and Data types (matrices, frames, list), Combining data (cbind, rbind). Importing/Exporting data into R.
Day -	Generating sequences, function repeats, component extraction (for vectors,

matrices, list, frames), Creating factors, Basic statistical functions (mean, median, mode, standard deviation, skewness, kurtosis etc.), installing packages and library, importing data from other sources (Excel etc.). Graphics in R: Simple graphics (Bar, Multiple Bar, Histogram, Pie, Box-Plot, Scatter ,plot, qqplot) ,Correlation and Regression: Correlation (Karl Pearson & Spearman's rank correlation), Linear models in R (simple, multiple, logistic). Testing of correlation and regression coefficients. Scatter plot and Regression line.

Day -IVConcept of Estimation & Testing.
Parametric Methods: Tests of significance for the parameters of normal
distribution i.e. mean and variance (one sample and two sample problems) and
the relevant confidence intervals. One-way and Two-way Analysis of
Variance.
Multivariate Techniques:
Cluster Analysis and Discriminant Analysis



Organising Committee

Dr. Mohammad Khalil Ahmad	Mr. Shaikh Irshad W	Mrs. Elakshi Tawade-Khetal
Principal, A E Kalsekar College	(IQAC Co-ordinator)	(Co-ordinator Self Finance
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