



Online Workshop

On

Data Analysis with R

Organized By

Department of Economics, St. Xavier's University, Kolkata

In Collaboration With

Xavier's University Economics Society



Dates: 2nd January 2025 to 4th January 2025

Time: 10:00 AM and 1:00 PM

Mode: Online (Zoom Platform)

About St. Xavier's University, Kolkata

St. Xavier's University, Kolkata, established in 2017, is a prestigious institution rooted in the Jesuit tradition of academic excellence and holistic education. Founded under the visionary leadership of Rev. Fr. Dr. John Felix Raj, S.J., the university embodies the Jesuit commitment to intellectual rigor, social responsibility, and service to humanity. Located in the New Town area of Kolkata, the university offers a serene and inspiring environment conducive to learning and research. The university provides a wide range of undergraduate, postgraduate, and doctoral programs across disciplines, including Commerce, Humanities, Social Sciences, and Management. Since its inception, St. Xavier's University has been dedicated to fostering academic excellence, innovation, and ethical values in its students, preparing them for leadership roles in a dynamic global landscape. The institution prides itself on its modern infrastructure, state-of-the-art facilities, and a vibrant campus life that supports holistic development and the cultivation of critical thinking skills. St. Xavier's University, Kolkata, continues to expand its academic and research horizons, becoming a beacon of quality education and social consciousness in Eastern India and beyond.

Online Workshop On Data Analysis with R

In the era of data-driven decision-making, the ability to effectively analyze and interpret data has become crucial across various fields, including business, healthcare, education, finance, and social sciences. *R software*, a free, open-source programming language is one of the most effective tools for data analysis in today's world. R is a favorite tool among statisticians, data scientists, and researchers in fields like economics, psychology, and social sciences. Its statistical capabilities and extensibility make it ideal for analyzing complex datasets and performing hypothesis testing in academic research. So, *Xavier's University Economics Society (XAVECOS)*, *St. Xavier's University, Kolkata* organizes *three-days Online Workshop on Data Analysis with R* for undergraduate and postgraduate students with Social Sciences background from colleges and universities across India. The workshop will introduce participants to the basics of R programming, while also covering key topics such as Linear Regression and Time Series Analysis using R software. This workshop can be highly beneficial for students as it can equip them with

practical and in-demand skills in a flexible, cost-effective manner which is a requirement both in academics and industry. Students who attend the workshop on all three days will be provided with E-certificates at the end of the programme.

Topics Covered in the Workshop

Day 1: Introduction to R Programming and Matrix Operation in R

- What is R?
- Importance of R in data science and statistics.
- Installing R and RStudio.
- Overview of the RStudio interface.
- Basic R Syntax and Data Structures
- Basic Functions and Operations
- Matrix Construction
- Basic Matrix Operations

Day 2: Exploratory Data Analysis

- Data Inspection
- Data Cleaning and Preprocessing
- Data Visualization
- Univariate, Bivariate and Multivariate Analysis

Day 3: Linear Regression, Cross Section and Time Series Analysis

- Fitting Linear Regression Models in R
- Model Diagnostics and Assumptions Checking
- Model Interpretation and Evaluation
- Cross sectional data analysis
- Time Series Plotting
- Stationarity and Differencing
- Autocorrelation and Partial Autocorrelation
- ARIMA Model Overview
- Application based on Indian data
- Assignment

Resource Persons

Dr. Subhanil Chowdhury



Dr. Subhanil Chowdhury is an Associate Professor in the Department of Economics, St. Xavier's University, Kolkata since July, 2021. With over 11 years of experience in teaching and research, Dr. Chowdhury has made a significant impact at the Institute of Development Studies Kolkata (IDSK) before joining SXUK, where he has not only contributed as a researcher but has also guided numerous MPhil and PhD scholars, shaping the future of economic research. His expertise was further honed during his tenure as a Fellow at the Indian Council for Research on International Economic Relations (ICRIER), New Delhi, where he worked on important national and international economic issues. Dr. Chowdhury's research contributions are extensive, having successfully led several high-profile research projects funded by prestigious organizations such as the CII, ICICI Foundation for Inclusive Growth, ICSSR, ILO, and the Government of West Bengal, among others. His dedication to advancing knowledge in the field of economics and his impact on academia and policy make him a respected figure in his field.

Dr. Chayanika Mitra



Dr. Chayanika Mitra is an Assistant Professor in the Department of Economics at St. Xavier's University, Kolkata, where she has been a faculty member since July 2019. Dr. Mitra completed her PhD at the prestigious Indian Statistical Institute, Kolkata in June 2019, marking the beginning of a promising academic career. Her research interests span several key areas, including Applied Econometrics, Time Series and Forecasting, Cross-Section Data Analysis, Gender Economics, and Family Economics. In April 2024, she was selected for the Summer Faculty Research Fellow Programme at IIT Delhi, a recognition of her academic prowess and research potential. Dr. Mitra's scholarly contributions have been widely acknowledged, including being awarded the Young Researcher Award in 2020 by the Institute of Scholars (InSc) for her paper, "Gender Bias in Household Education Expenditure: The Case of West Bengal". Co-authored with her supervisor Prof. Amita Majumder, ISI Kolkata. This paper was published in the Indian Growth and Development Review, further solidifying her expertise in gender economics.

Participants

All the undergraduate and postgraduate students with Social Sciences background from colleges and universities across India are invited to participate in the online workshop. ***Students who attend the workshop on all three days and submit the given assignment will receive an E-certificate upon completion of the program.***

Registration Procedure

Step-1

Students pay a registration fee of *Rs.1000 (Including Goods and Services Tax)* either by scanning the QR code or using bank details given below.

QR Code



Bank Details

Beneficiary Name : ST. XAVIER'S UNIVERSITY KOLKATA ALUMNI ASSOCIATION

Branch IFSC Code : CNRB0019721

Account Number : 97212010001155

Bank Name : Canara Bank

Branch Name : ST XAVIER'S UNIVERSITY RAJARHAT CAMPUS KOLKATA

Please keep the Payment Transaction ID and date ready after making the payment, as it will be required in step 2.

Step 2

Fill the personal details (Name, contact no.), institutional details (college/ university name, course, semester) and transaction ID in the registration link given below. **Last Date of Registration is 31st December, 2024.**

Registration Link: <https://forms.gle/UFnrZ2XtP116VPjw5>

Step 3

Your participation will be confirmed (through email) once all the details is verified by the organization. You will also be added to WhatsApp group for sharing further information regarding the event.

Faculty Coordinator

Ms. Srijita Ghosh

Assistant Professor, Department of Economics

Professor-In-Charge, XAVECOS

St. Xavier's University, Kolkata

For any further query

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