# **R FOR BEGINNERS**

A WORKSHOP SERIES BY THE INTERNATIONAL INSTITUTE OF MIGRATION AND DEVELOPMENT, TRIVANDRUM

An offline R Programming workshop for aspiring researchers, students and analysts.

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The workshop aims to provide an overall knowledge of R Programming from scratch and enable students to navigate R, handle raw data and analyze data efficiently through appropriate techniques.



The course is targeted at beginners and will elevate you to a position where you will be able to find solutions for your R problems on your own.



# INSTRUCTOR

Dr. Ajith is a senior research fellow at IIMAD. He has an MBBS (1995 batch) and PG Diploma (Clinical Pathology, 2008 batch) from the government medical college, Thiruvananthapuram. He worked with the Indian Ordnance Factories Health Service for 21 years until 2022. He has completed the India Epidemic Intelligence Course 2014-16 from the National Centre for Disease Control.

#### **ONLY 10 SEATS AVAILABLE!**

FILL THE FORM TO EXPRESS INTEREST!



SCAN TO REGISTER!

# **COURSE SCHEDULE**

## **OPTION - 1 (RS. 3000)**

- A total of four sessions (3 hours per session), across two days.
- A two-day workshop will be held over a single weekend, with sessions on both forenoons (9:30 AM to 12:30 PM) and afternoons (1:30 PM to 4:30 PM).
- This option will not have a mini project

# OPTION -2 (RS. 3000)

- Five sessions (3 hours per session) over 5 working days of a week, either on forenoons or afternoons.
- Each session will be 3 hours long
- There will be a mini project at the end of the programme

## **OPTION - 3 (RS. 5000)**

- Ten sessions (3 hours per session) over 5 working days of a week.
  Will be held on both forenoons (9:30 AM to 12:30 PM) and afternoons (1:30 PM to 4:30 PM)
- Forenoons will be a theory session about descriptive statistics and common statistical tests. Afternoons will implement in R studio the theory taught in the morning.
- There will be a mini project at the end of the programme

WHILE FILLING THE GOOGLE FORM PLEASE CHOOSE ONE OF THE ABOVE THREE OPTIONS. SUITABLE DATES WOULD BE FIXED IN CONSULTATION WITH ALL THE REGISTRANTS. THE WORKSHOP IS LIKELY TO HAPPEN IN THE FINAL WEEK OF MAY OR FIRST WEEK OF JUNE

# **COURSE OUTLINE**

#### **LEVEL -1 BASICS**

- Introduction to R: The workshop will commence with an introduction to R, ensuring that even those with no prior experience can start learning from scratch. Participants will familiarize with the R environment, its interface, and basic functionalities.
- Level 1 of the workshop will equip participants to use R to generate descriptive statsics. Participants will learn to generate numerical and graphical summaries of categorical and numerical data. Base R and tidyverse methods will be taught. Participants will be introduced to literate programming.

## **LEVEL -2 INTERMEDIATE**

- Level 2 will introduce participants to data cleaning and data reshaping techniques.
- Later half of level 2 is dedicated to analytical methods. Participants will learn to perform common statistical tests like chi square, t test, wilcoxon, Kruskal Wallis, ANOVA etc using R. Participants will be introduced to linear regression.

## METHODOLOGY

- Hands-on Exercises: To reinforce the concepts taught during the workshop, participants will engage in hands-on exercises. They will work with real-world datasets, allowing them to practice what they've learned and gain confidence in their R skills.
- Practical Application: The workshop will emphasize practical applications, encouraging participants to bring their own research questions or data for analysis. This real-world application helps learners understand how to adapt R to their specific needs.

## OUTCOMES

- Collaboration and Networking: Participants will have the opportunity to interact with instructors and fellow attendees, facilitating the exchange of ideas and networking within the field.
- Resources and Support: The workshop will likely provide resources such as reference materials, scripts, and sample datasets, and may offer post-workshop support to help attendees continue learning and applying their skills.
- Certification: Depending on the structure of the workshop, there may be a certification or acknowledgment provided to participants who complete the program, which can be a valuable addition to their resumes.

By the end of the workshop, participants should have a solid foundation in using R for data analysis, particularly in the context of migration and development research. This knowledge will be invaluable for those pursuing careers in research, policy analysis, or data-driven decision-making related to migration and development issues.

## **LEVEL 1 REQUIREMENTS**

- Students are required to have access to a computer with latest version of R and R studio installed.
- No more than two students may share one computer.
- Students should learn /revise the numerical and graphical summaries used for descriptive statics.

## **LEVEL 2 REQUIREMENTS**

 In addition to the requirements for level 1, students should learn about common analytical summaries. They may use <u>https://sccn.ucsd.edu/~arno/mypapers/statistics.pdf</u> as a starting point.