



# FUNDAMENTALS OF R-PROGRAMMING



## OVERVIEW

This course aims to aid individuals in the field of health science, health policy and health administration who are keen on developing their knowledge in quantitative research methods and building computation skills under an open-source platform.

## OBJECTIVES

Through the completion of this course, participants will be able to

- Understand the fundamentals of R, a widely known open-source language.
- Explain the basic ideas of programming in R, such as functions, variables, data types, pipelines, and vectors.
- Create summary tables using R
- Create bar charts, histograms, pie charts, scatter plots, line plots, box plots, and maps using R
- Conduct data analysis

## DURATION

Weekly 2 classes on Monday and Friday, 2 hours each for 12 weeks from

**3 FEB 2025 - 5 MAY 2025.**

**Time: 6pm - 8pm IST**

**Registration closes on 31<sup>st</sup> JAN 2025**

## PRE-REQUISITE

Basic knowledge in mathematics

## MATERIALS

Lectures and course handouts will be provided.

## EVALUATION

Credit will be given for completing all assigned weekly homework exercises.

## FEES

Rs 11,800(Including GST) /-

## MODE

Online - Microsoft Teams



## CONTACT

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## SYLLABUS

Introduction, Installation, and orientation  
 Basic operations and data structures in R  
 Data import, export, and manipulation  
 Control Structures and Repeat Operations  
 Functions in R  
 Learning Debugging through developing and using user-defined functions in R  
 Data Visualization using Base R  
 Data Visualization using ggplot2  
 Exploratory data analysis in R  
 Statistical inference using R  
 Multivariate data analysis using R  
 A case study using R

## Evaluation Scheme

Topic	Method
Basic operations in R	Assignment
Data manipulation and control structures	Assignment
Functions and debugging	Assignment
Visualization	Assignment
Statistical analysis	Assignment
All topics	Final Exam

## REGISTRATION

1. Pay course fee (NEFT/UPI/ Credit Card/ Debit Card)
2. Complete registration by filling the [google form](#).

[www.stjohns.in](http://www.stjohns.in)/[www.sjri.res.in](http://www.sjri.res.in)

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Scan here for the google form

## ACCOUNT DETAILS

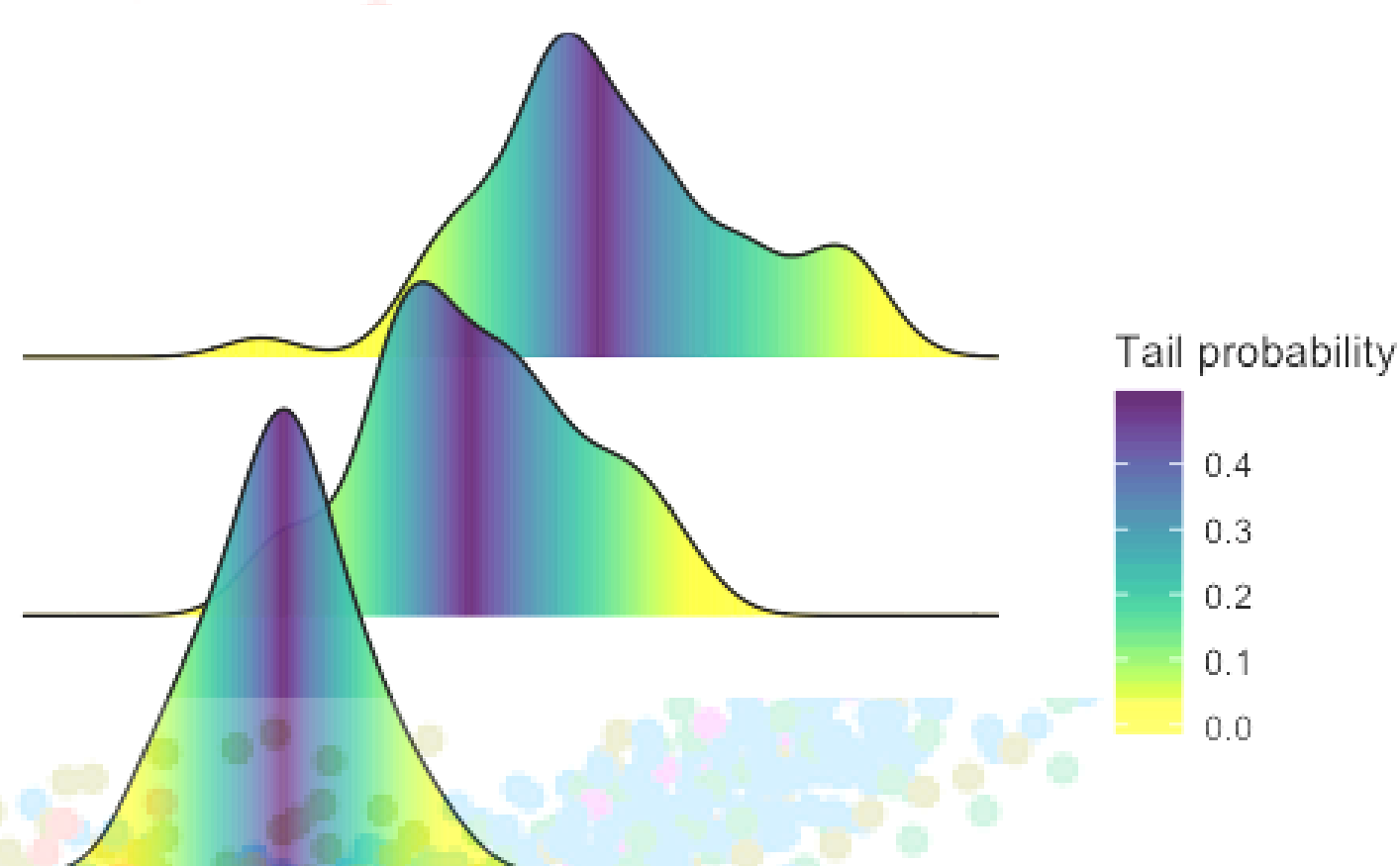
Beneficiary name: St. John's Research Institute

Bank name: Bank of Baroda

Beneficiary's Bank A/c#: **05210200000180**

Branch: John Nagar

IFSC Code: **BARBOSTJOHN** (5th digit zero)



## COORDINATORS

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