You are invited to attend a virtual course hosted by ICCSSA
Data Wrangling with R
8 June 2023 16:00 – 18:00
Course Cost: R350

PRESENTER:

Dr Priyanka Nagar
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Institutional affiliation: University of Pretoria
Faculty: Natural and Agricultural Sciences
Department: Statistics
Position: Lecturer

REGISTER [HERE](#):

ONCE REGISTERED YOU WILL RECEIVE AN INVOICE VIA EMAIL TO DO THE PAYMENT VIA EFT.
ONLY PAID REGISTRATIONS WILL HAVE ACCESS TO THE COURSE.
ALL PAYMENTS MUST BE RECEIVED BY 7 JUNE 5PM.

Dr Priyanka Nagar started her academic studies at the University of Pretoria where she obtained her BSc in Actuarial and Financial Mathematics, BSc (Hons), MSc and PhD in Mathematical Statistics. Her research interests are in the field of directional statistics and distribution theory with various applications. Her PhD thesis focused on applications in wind energy and orthopaedics.

From 2017 to 2020 Priyanka was appointed as a lecturer in the Department of Statistics at the University of Pretoria. During her appointment she taught courses focused on the foundational topics of Mathematical Statistics at a first and second year level. She also developed a course for second year students focused on Applications in Data Science which introduced a more practical side of statistics at an undergraduate level. During 2021 Priyanka spent a year working in the telecommunications industry as a full stack data scientist. In 2022 she re-joined the Department of Statistics at the University of Pretoria as a lecturer where she uses R software to facilitate teaching of data science techniques. Priyanka developed an interest in data science during her postgraduate studies and explores machine learning applications in her spare time.

DATA WRANGLING WITH R

COURSE DESCRIPTION
This course introduces programing and data analysis in R using RStudio. The course covers understanding the data structures and data wrangling in R via the `tidyverse` package.

COURSE CONTENT
The following topics will be presented:

1. Data types and structures
2. Data wrangling

LEARNING OUTCOMES
The learning outcomes are:

1. Data types and structures
   - To be able to identify the 5 main data types.
   - To begin exploring data frames, and understand how they are related to vectors, factors and lists.

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- To be able to ask questions from R about the type, class, and structure of an object.
- Understand what a factor is.
- Convert a factor to a character vector and vice versa.
- Change how character strings are handled in a data frame.
- Examine and change date formats.

2. Data wrangling:
- Add and remove rows or columns.
- Handle missing values.
- Append two data frames.
- Display basic properties of data frames including size and class of the columns, names, and first few rows.
- To be able to subset vectors, factors, matrices, lists, and data frames
- To be able to skip and remove elements from various data structures.
- Be able to analyze a subset of data using logical filtering.
- Regular expressions for extracting characters from strings

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