

A Report on One Day R workshop for Co-ordinators on 12nd October 2019

ATME College of Engineering conducted “**One Day R workshop for Co-ordinators**” on behalf of IIT Bombay as a Remote Centre on 12rd October 2019.

The Workshop began with a A-View Live session. Inaugural talk was given by **Prof. Radhendushka Srivastava** and **Prof. Kannan Moudgalya**- An introduction to Spoken tutorials was discussed. The inauguration was followed by Hands-on Sessions through spoken tutorials. The contents of the workshop was organised into various videos.

During Session Schedule

Date	Time Slot	Topic
October 12th, 2019	09:00 - 09:30	Connect online on A-VIEW and testing session - Online through A-VIEW
	09:30 - 10:00	Inaugural talk by Prof. Radhendushka Srivastava and Prof. Kannan Moudgalya - Online through A-VIEW
	10:00 - 10:15	Introduction to Spoken Tutorial Forums - Online through A-VIEW
	10:15 - 10:30	*Tea Break
	10:30 - 12:30	Activity: Hands-on session using spoken tutorials - At remote centre
	12:30 - 13:00	Interaction with Remote centers - Online through A-VIEW
	13:00 - 14:00	*Lunch Break
	14:00 - 15:30	Activity: Hands-on session using spoken tutorials - At remote centre
	15:30 - 16:00	*Tea Break
	16:30 - 17:00	Activity: Hands-on session using spoken tutorials - At remote centre
16:30 - 18:00	Question and Answer session and Valedictory session - Online through A-VIEW	

Session-1

1] Introduction to R and installation process was discussed.

1. Locate the topic "Installing Software R 3.6.1".
2. To view the tutorial, click on the Play icon which is located in the player.

2] Basics of R was Discussed

Outline: Version of R and RStudio used Operating systems on which these run Quick introduction on to R and RStudio , Resizing the font and window size *, +, -, ^, sqrt exp, log, sin Diff..

3] Introduction to Data Frames in R

Outline: Storing captaincy information in vectors, Constructing a data frame using vectors Plotting, one vector of a data frame vs. another , one Adding a vector to a data frame Saving a data..

4] Introduction to RStudio

Outline: Features of RStudio , A look at the windows in R Studio interface: Source and Console windows Workspace window Plots and Files window.

5] Introduction to R script

Outline: What is an R script ? Features of an R script . How to create and save an R script from the user interface (UI) of RStudio. Shortcut keys to create an R script. How to use auto-com.

6] Working directories in R-Studio

Outline: What is working directory in R? How to know the current working directory? How to use getwd function? How to set a working directory from the user interface of RStudio?

Session-2

7] Indexing and Slicing Data Frames

Outline: Shortcut key for assignment operator (<-). How to perform numeric indexing? How to extract a row or column from a data frame? How to retrieve multiple rows from a data frame?.

8] Creating Matrices using Data Frames

Outline: Data required in a matrix format. Convert a data frame into a matrix. Create a matrix with known data. Add two matrices. Subtract two matrices. Multiply two matrices.

9] Operations on Matrices and Data Frames

Outline: How to find the inverse of a matrix How to calculate the sum of elements in a matrix using for loop How to calculate the sum of elements in a matrix using the sum function How..

Session-3

10] Merging and Importing Data

Outline: Use of built-in functions in R for exploring a data frame, Access help in RStudio Advantages of merging data frames , Merge two data frames Import data from command line .

11] Data types and Factors

Outline: What is an object in R Types of R - objects What is an atomic vector in R Types of atomic vectors How to find types of vectors Factors in R Levels of a factor in R

Session-4

1] Advance topics of R Language.

What is data visualization, Need for data manipulation, What is dplyr package Functions in dplyr , package Install dplyr package, Use filter function Use filter function wit..

The workshop was concluded by Questionnaire and Valedictory session

Workshop Coordinator:

Mohanesh B M
Assistant Professor
Department of CSE