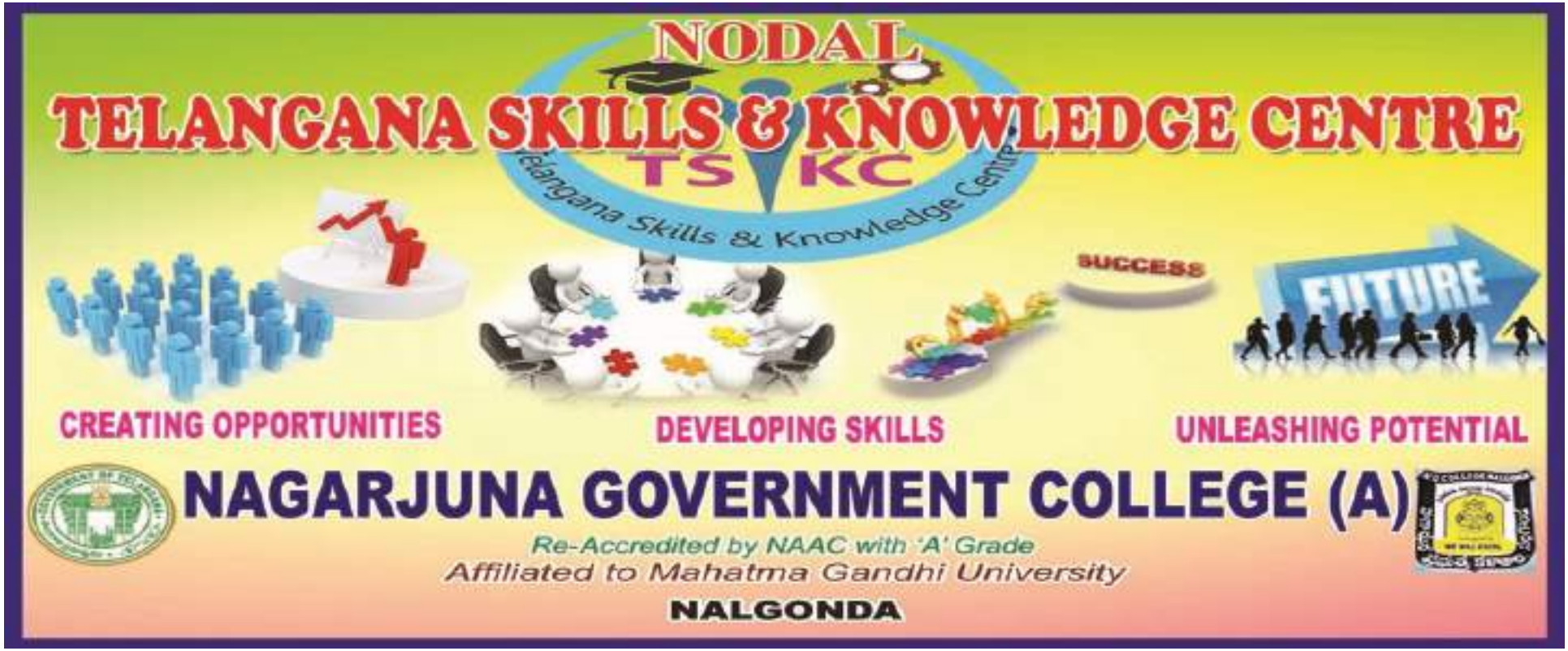
NAGARJUNA GOVT. COLLEGE (A)

IIT BOMBAY SPOKEN TUTROAL

AYADEMIC YEAR: 2021-22

Organized by



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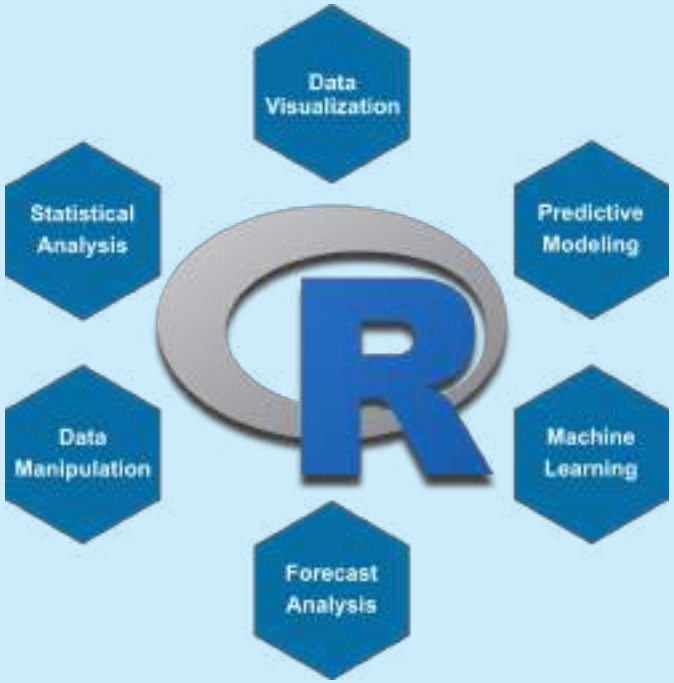

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CERTIFICATE

COURSE

NAGARJUNA GOVT. COLLEGE (A) NALGONDA
TELANGANA SKILLS & KNOWLEDGE CENTRE

R Programming
Certificate Course

in collaboration with

IIT Bombay Spoken Tutorial

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Report:

Telangana Skills & Knowledge Centre (TSKC) conducted a certificate course on R Programming from 01-03-2022. In this course 20 MSCS III Year students were enrolled and successfully completed their course.

Course outcome:

R is rapidly becoming the leading programming language for effective data analysis and statistics. It is the tool of choice for many data science professionals in every industry. The program delves into intricacies of calculations, co-relations and statistical probabilities and teaches the learners the fundamental understanding of programming with R, detailing all aspects of the language such as understand and process data structures, and mine information through data analysis that can suit a wide variety of purposes, and sectors as varied as finance, defence, health, education, etc. In this course, student will learn about The basics of statistical computing and data analysis, How to use R for analytical programming, How to implement data structure in R, R loop functions and debugging tools, Object-oriented programming concepts in R, Data visualization in R, How to perform error handling and Writing custom R functions

NAGARJUNA GOVT. COLLEGE (A) NALGONDA
TELANGANA SKILL & KNOWLEDGE CENTRE

Date: 23-02-2022

NOTICE

All the B.Sc, B.Com & B.A students are hereby informed that, who are not registered in the IIT Bombay Spoken Tutorial, register immediately by scanning the QR Code

Note:

1. It is a free of cost & remote learning training
2. After completion of course you will get a certificate from IIT Bombay Spoken Tutorial
3. Course will be allotted and intimate on 28-02-2022
4. Already registered student no need to register again

TSKC Co-Ordinator (Nodal)
N.G. College (A), NALGONDA

NAGARJUNA GOVT. COLLEGE(A) NALGONDA

TELANGANA SKILL & KNOWLEDGE CENTRE

IIT BOMBAY SPOKEN TUTORIAL

R Programming Language- Certificate Course-Student Enrollment

Sl.No	Name	Roll Number	Group	Year	Email	Gender
1	AKKENAPALLY RENUKA RENUKA	19044028467002	MSCS	III	renukaakkenapally823@gmail.com	Female
2	BATHULA VIDYA	19044028467004	MSCS	III	vidyareddybathula8@gmail.com	Female
3	KOLA SREEJA	19044028467011	MSCS	III	kolasreeja.ngc@gmail.com	Female
4	KUKUDALA RAMANARDDY	19044028467012	MSCS	III	ramanareddykukudala@gmail.com	Male
5	RAMAVATH LALITHA LALITHA	19044028467019	MSCS	III	ramavathalalitha984965@gmail.com	Female
6	SAPAVATH BABY	19044028467023	MSCS	III	babysapavath@gmail.com	Female
7	SAIJYOTHI SRIRAMULA	19044028467027	MSCS	III	saijyothisriramula665@gmail.com	Female
8	SUNKARABOINA PREMALATHA	19044028467028	MSCS	III	sunkaraboinapremalatha123@gmail.com	Female
9	VANAM DHANUSH	19044028467029	MSCS	III	vanamdhanushnetha@gmail.com	Male
10	PRIYA GADAGOTTI	19044028467007	MSCS	III	priyagadagotti@gmail.com	Female
11	JELLA SHILPA	19044028467008	MSCS	III	jellashilpa123@gmail.com	Female
12	SRIRAMOJU SRAVANI SRIRAMOJU	19044028467026	MSCS	III	sriramojusravani48@gmail.com	Female
13	BHUKYA JAGADISH KUMAR	19044028467005	MSCS	III	bhukyajagadeeshkumar.ngc@gmail.com	Male
14	SAIKUMAR KANCHARIKUNTLA	19044028467009	MSCS	III	kancharakuntlasaikumar@gmail.com	Male
15	MAHESH KATHULA	19044028467010	MSCS	III	maheshkathula646@gmail.com	Male
16	RAJKUMAR ORSU	19044028467016	MSCS	III	rajkumarorsu7@gmail.com	Male
17	PULUGU MAHESH	19044028467017	MSCS	III	maheshpulugu9381@gmail.com	Male
18	SAKINALA PRANAVA SWAROOP	19044028467022	MSCS	III	spranavaswaroop@gmail.com	Male
19	SAPAVATH SHIVA	19044028467024	MSCS	III	shiva.sapavath2001@gmail.com	Male
20	VARIKUPPALA MAHENDAR	19044026487030	MSCS	III	varikuppalamahendarngc@gmail.com	Male

NAGARJUNA GOVT. COLLEGE (A) NALGONDA
TELANGANA SKILL & KNOWLEDGE CENTRE

Date: 28-02-2022

NOTICE

All the below mentioned groups of IIT Bombay Spoken Tutorial registered students hereby informed that, TSKC allotted your course for the Academic year 2021-22 shown below. In this regard instructed that complete your course before 31-03-2022.

Sl.No	Group	Year	Course Alloted	Duration
1	BCOM CA	III	C and Cpp	1 Month
2	BZCS	III		
3	MPCS	II		
4	BZC	III	Jmol Application	
5	MPC	III		
6	BBC	III		
7	MZC	III		
8	MBC	III		
9	BTZC	III		
10	MSCS	III	R	
11	MPG	III	Scilab	

Note: Any doubts contact @ TSKC Lab, NG College(A) Nalgonda

TSKC Co-Ordinator (Nodal)
N.G. College (A), NALGONDA

Instruction Sheet for R (Statistical Tool)

Spoken Tutorial Team
IIT Bombay

1 Online / Offline content

1. The online content of Spoken Tutorials can be accessed from : https://spoken-tutorial.org/tutorial-search/
2. You can also download the Spoken Tutorials for offline learning from : https://spoken-tutorial.org/cdcontent/
3. From this link download the FOSS categories in the language you wish to learn.
4. The Spoken Tutorial content will be downloaded as a zip file on your machine.
5. Extract the contents of the zip file & access them.

2 The procedure to practise

1. You have been given a set of spoken tutorials and files.
2. You will typically do one tutorial at a time.
3. You may listen to a spoken tutorial and reproduce all the steps shown in the video.
4. If you find it difficult to do the above, you may consider listening to the *whole* tutorial once and then practise during the second hearing.

3 Side-by-Side learning video (only for offline content)

1. Go to the folder named spoken on your machine.
2. Locate `index.html` file.
3. Open this file with either `Firefox` or `Chrome` web browser.
4. The Side-by-Side learning video will appear. This video will explain how to learn from the spoken tutorials.
5. Click on the Play button to play the video.
6. Note all the steps explained therein.

4 R

1. Click on `"Select FOSS Category"` drop-down and choose `"R"`.
2. Click on `"Select Language"` drop-down and choose the language (English).
3. Click on `"Submit"` button.
4. You will see a list of tutorials based on your selection.
5. Start with the first tutorial in the displayed list.

5 General instructions for R

1. To open a new R script, press `Ctrl` + `Shift` + `N` keys together.
2. To type the assignment operator (`<-`), press `Alt` + `-` keys together.
3. To type the pipe operator `(%>%)`, press `Ctrl` + `Shift` + `M` keys together.
4. To run a block of code, select the block of code and click on `Run` (in the `Source` window). Alternatively, select the block of code and press `Ctrl` + `Enter` keys together.
5. To run an entire script, click on `Source` (in the `Source` window). If it does not display the results, from the drop-down menu of `Source`, click on `Source with Echo`. Alternatively, click anywhere in the script and press `Ctrl` + `Shift` + `Enter` keys together.
6. Depending upon the version of `RStudio` installed on your machine, you might have a different interface than that shown in the tutorials.
7. For the sake of convenience, four packages `plyr`, `MASS`, `ggplot2` and `dplyr` have already been installed (during the installation of `RStudio`). However some of the tutorials show the installation of these packages again. Please skip those steps and move further.

6 First tutorial: Overview of R and RStudio

1. Locate the topic `Overview of R and RStudio` and click on it.
2. This tutorial explains the features of `R` along with `RStudio` and provides an overview of this tutorial series.
3. To view the tutorial, click on the `Play` icon, which is located in the player.

7 Second Tutorial: Installing R and RStudio on Linux

1. If you are using Linux, locate the tutorial `Installing R and RStudio on Linux` and watch it.
2. If `R` and `RStudio` are already installed, please skip this tutorial.

8 Third Tutorial: Installing R and RStudio on Windows

1. If you are using Windows, locate the tutorial `Installing R and RStudio on Windows` and watch it.
2. If `R` and `RStudio` are already installed, please skip this tutorial.

9 Common Instructions

1. To view the tutorial, click on the `Play` icon which is located in the player.
2. The `Pre-requisite` will be visible below the player (only for Online contents).
3. `Outline`, `Assignments` and `Code Files` are available below the player.
4. Adjust the size of the browser in such a way that you are able to practise in parallel.
5. Instructions to use Code files in any tutorial: (a) Click on the link `Code files` located below the player and save it in your folder.
   (b) Extract the downloaded zip file.
   (c) You will see all the code/source files used in the particular tutorial.
   (d) Use these files as per the instructions given in the particular tutorial.
6. Play-pause-practise the whole tutorial.
7. Attempt the `Assignments` as instructed.
8. Save your work in your folder.
9. Once the tutorial is complete, choose the next tutorial from the playlist which is located on the right side or below the player.
10. Follow all the above instructions, till you complete all the tutorials in the series.

10 Fourth Tutorial: Introduction to Basics of R

1. At 2:23, you won't have `Untitled1` open if you are opening `RStudio` for the first time. To have `Untitled1`, click in the `Console` window and press `Ctrl` + `Shift` + `N` keys together.
2. At 9:56, the video asks to hit `Return`. Please hit `Enter` if you are using a computer other than Mac.

11 Fifth Tutorial: Introduction to Data Frames in R

1. For Windows operating system, the file `NewCaptaincy.csv` will be saved in the `Documents` folder. To view this file, open it with `Notepad` or any other compatible text editor.
2. For Linux operating system, the file `NewCaptaincy.csv` will be saved in the `home` directory. To view this file, open it with `gedit` or any other compatible text editor.
3. At 9:37, the video shows to click `From Text File`. If you are using a higher version of `RStudio`, click on `From Text (base)`.

12 Twelfth Tutorial: Merging and Importing Data

1. This tutorial requires installation of some packages like `libxml2-dev`, `XML`, `readxl` and `Rcpp`. **Please skip this tutorial, in case you are not connected to the Internet.**
2. At 9:05, the video asks to install `libxml2-dev` before installing `XML` package on Ubuntu OS. To install this package, Ubuntu OS user should follow the steps given below:
   Step 1: Open the terminal by pressing
   `Ctrl + Alt + T keys` together.
   Step 2: Type the command
   `sudo apt-get update` and press enter.
   Step 3: If prompted for the password, type your password and press enter.
   Step 4: Type the command
   `sudo apt-get install libxml2-dev` and press enter.
   Resume the tutorial once the packages are installed.
   ⋆ Please note, for Windows OS, this package is not needed.
3. At 12:00, the video demonstrates how to import an Excel file from user interface of `RStudio`. Two packages; `readxl` and `Rcpp`, are required to export Excel files in `R`. If these packages are not installed and you are trying to import an Excel file, a pop-up message will appear. Click on "Yes" to begin the installation. Resume the tutorial after the package is installed.

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Certificate of Participation

This is to certify that **AKKENAPALLY RENUKA RENUKA** participated in the **R** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2022** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

A comprehensive set of topics pertaining to **R** were covered in the training.

March 2nd 2022

Prof. Kannan M Moudgalya
IIT Bombay

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This is to certify that **BATHULA VIDYA** participated in the **R** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2022** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

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This is to certify that **KOLA SREEJA** participated in the **R** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2022** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

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This is to certify that **RAMAVATH LALITHA LALITHA** participated in the **R** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2022** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

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This is to certify that **VANAM DHANUSH** participated in the **R** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2022** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

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This is to certify that **PRIYA GADAGOTTI** participated in the **R** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2022** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

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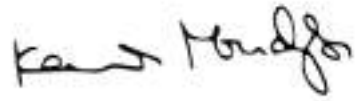

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This is to certify that **JELLA SHILPA** participated in the **R** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2022** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

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This is to certify that **SRIRAMOJU SRAVANI SRIRAMOJU** participated in the **R** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2022** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

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This is to certify that **BHUKYA JAGADISH KUMAR** participated in the **R** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2022** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

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This is to certify that **SAIKUMAR KANCHARIKUNTLA** participated in the **R** training organized at **Nagarjuna Government College (Autonomous), Nalgonda** in **January 2022** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

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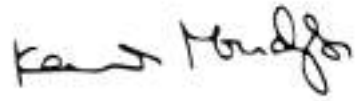

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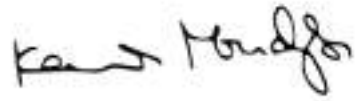

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