

Report on Student Training Program

Title: Student Training Program on Data Science Using R Programming

Date(s): 1st February 2021 to 17th February 2021

Time: 1.00pm-03.00pm

Preamble: Student Training Program on Data Science Using R Programming has been conducted from 1st February 2021 to 17th February 2021, at Karmaveer Bhaurao Patil College, Vashi. This Student Training Program has been sponsored by RUSA (Rashtriya Uchchatar Shiksha Abhiyan) and collaboration with The Magic Data.

Participant's Details: A total of 34 participants attended the workshop. Among the participants 28 students were there and 6 faculties.

Description about the Program:

The Inaugural started with a welcome speech by Assistant Professor Mrs. Dipti Kulkarni. The Student Training Program was held by Rayat Shikshan Sanstha's, Karmaveer Bhaurao Patil College, Department of computer science in collaboration with The Magic Data under the Aegis of RUSA on Data Science Using R Programming. The spokesperson of the workshop was Mr. Pradeep Khare, is a versatile software engineer with 13 years of proven industry experience in the field of Information Systems, Data Analytics/Data Science, Artificial Intelligence. He has completed his MS in business Analytics from University of Michigan, MBA in finance and marketing and BE from University of Mumbai. Apart from picking up skills he has also trained a number of corporate and students in Data science and Artificial Intelligence.

Objective:

- To enable participants:
- To create various visualization and dashboard
- To analyze the trend of Data Science and detect pattern of share trading
- To use Data Science technique to solve real life business problem
- To apply various machine learning algorithms

Workshop Content:

Basic of R

- 1] R Syntax
- 2] Working with different collection objects

R IDE important packages Basic Operation in R Various Data Types in R

- 1] R Studio IDE
- 2] Important Packages. And how to install / update them. Make a tabular representation for which package does what
- 3] Run through various data types using example Special Focus: Dataframe. Also show them cut() function.

User Defined Function and Data Management in R

- 1] Loop structure.
- 2] Creating functions. a. Use apply() for creating function using one example.

- 3] Difference between lapply(), sapply() and apply() built-in function (not covered in this ppt)
- 4] Regex quick run through.
- 5] Explain sub(), gsub() and other string manipulation techniques. Use stringr() library.

Data Science using R

- 1] Hypothesis testing
- 2] Explain ANOVA both one way and two way
- 3] Probability and Distribution- Normal, Poisson. 4. Correlation and Dimension Reduction
- 4] Machine Learning Algorithms (Supervised and unsupervised) such as Linear regression, Naïve byes, Decision Tree, Ensemble algorithms using R

Basic Graphics Using R

- 1] Show how to create bar graph, pie chart, scatter plot and BW Plot
- 2] Use a .csv file (medical.csv) and show each types of graph accordingly

Mode of Workshop: Google Meet

Link: <https://meet.google.com/vcz-movp-hab>

Assistant Prof Mrs. Dipti Kulkarni, proposed a vote of thanks.

The entire programme was coordinated with the support of the Principal Dr.Shubhada Nayak, HOD Dr.Manisha Abhyankar, convener Mrs. Dipti Kulkarni and faculties of the Computer Science Department.

Feedback:

The entire session was an interactive session and the speakers answered many queries and doubts raised by the participants. Students understood the workshop and it was helpful for them.

To view the feedback. Link is given below

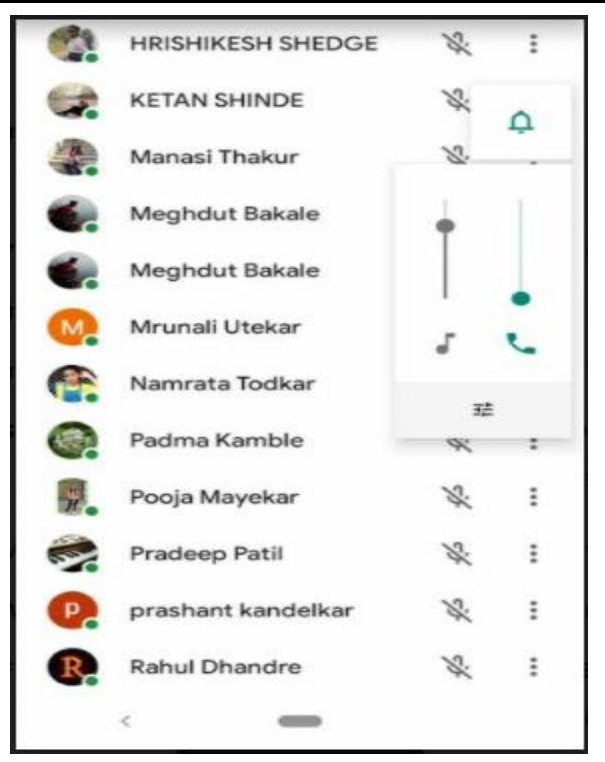
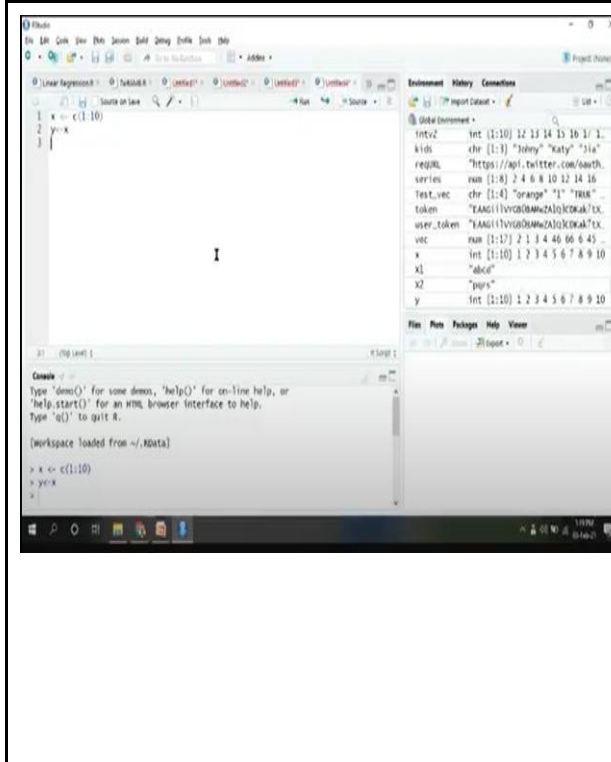
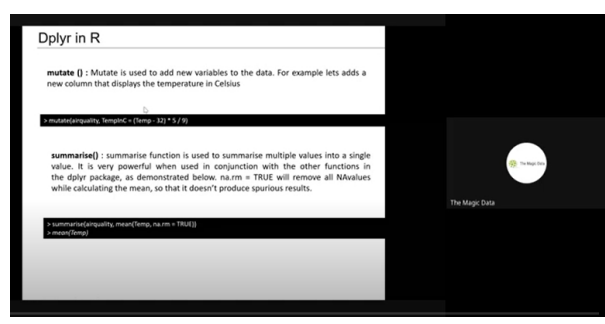
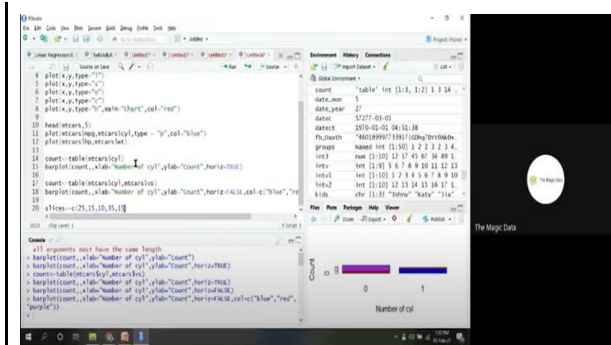
<https://forms.gle/enX6aYDFBkzQwZcd7>

Report Submitted by: Mrs. Swati Kadu

Designation: Assistant Professor

Department: Computer Science

Photos:



Types of Graphs in R – Bar Plots

Simple Bar Plot

```
counts <- table(mtcars$gear)
barplot(counts, main="Car Distribution", xlab="Number of Gears")
```

Number of Gears	Count
3	14
4	12
5	5

```

51
52
53 sports=c("football","cricket","badminton","baseball")
54
55 popularsports=c("rugby","cricket","badminton","baseball","tennis")
56
57 which(sports %in% popularsports)
58
59 sports[which(sports %in% popularsports)]
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```

```

> which(sports %in% popularsports)
[1] 1 2 3 4
> popularsports[c("rugby","cricket","badminton","baseball","tennis","basketball")]
[1] 2 3 4

```

Outcomes :-

- Students are able to connect to various data sources.
- Students are able to build a variety of basic and complex charts.
- Students are able to combine insights into a usable dashboard.
- Students are able to share and publish visualizations.
- Students are able to create complex calculations and dynamic parameters.
- Students are able to apply advanced formatting and data visualization best practices



The Magic Data

Memorandum of Understanding

Between

**RAYAT SHIKSHAN SANSTHA'S
KARMAVEER BHAURAO PATIL COLLEGE, VASHI**

&

THE MAGIC DATA, MUMBAI

For running Online Customized Training programs

This memorandum of understanding made at Mumbai on the _30th day of January, 2021

By and between KARMAVEER BHAURAO PATIL COLLEGE, VASHI

(hereinafter referred to as KBP College) a college established by Rayat Shikshan Sanstha of the first part

and

The Magic Data (hereinafter referred to as TMD, Mumbai) a company having its office at Mumbai of the Second part

The aforesaid institutions are hereinafter referred to individually as institute and collectively as institutes. Now therefore this MoU witnessed and it is hereby agreed by and between the parties hereto as follows:-

1. Objective of the MOU:

To conduct Online Training Programs mentioned below:

Data Science using R (30 Hours)

2. Tenure of the MOU:

This MoU shall be deemed to be in force for one year from the date of execution, mentioned above. Upon expiry of this term, the MoU can be renewed on mutual agreement.

3. Scope of MOU:

TMD, Mumbai has granted permission to conduct online Training Programs for KBP College as mentioned above in cl.1. KBP College has granted permission to TMD, Mumbai to promote its own program to KBP College students.

4. Roles and Responsibilities of KBP, College:

- a) KBP College will share prospective attendees' email addresses and contact numbers to send any communication
- b) KBP College should intimate two days in advance in case of any change in schedule.
- c) KBP College will pay honorarium directly to trainer appointed by TMD, Mumbai.
- d) KPB College should not circulate or make copies of shared material or recordings without proper consent from TMD, Mumbai.

5. Roles and Responsibilities of TMD, Mumbai:

- a) TMD, Mumbai will design and run Online training program for students on entity's authorized platform.
- b) TMD, Mumbai will appoint & supervise trainers to run decided training programs.
- c) TMD, Mumbai will not make and or display / publish / propagate any advertisement / leaflet / poster without prior approval of concerned authority from KBP College, Vashi, Navi Mumbai

7. Payment Terms:

- a) 50% of the assignment (Data Science Using R) value after starting the class and the remaining 50% within one week after completion of the project. The agreed amount is as per attached communication Annexure-I
- b) Payment should be made to trainer appointed by TMD, Mumbai as honorarium in the account mentioned below:
Trainer Name: Pradeep Khare
Bank Account Number: 002001566095 IFSC Code: ICIC0000020
Bank Name & Branch: ICICI Bank, Powai, Mumbai
PAN: ARCPK9123H
- c) Taxes are subject to change as per Govt. rules and regulations
- d) GST declaration is as per attached Annexure-II


8. Termination of MoU:

This MoU can be terminated by serving a notice of 02 (Two) month by either party. However, **TMD, Mumbai** reserves the right to terminate this MoU, without any notice, in the event of material breach of terms and conditions herein above.

9. Force Majeure:

Neither party shall be liable by reason of failure or delay in the performance of its obligations in terms of this MOU due to strikes, lockouts, wars or any act of God beyond the reasonable control of the Parties.

For: KBP College, Vashi, Navi Mumbai

Signature: 

Name: Dr. Shubhada Nayak

Designation: Principal

Address: Juhu Gaon, Sector 15 A, Navi Mumbai

Email id: shubhada009@gmail.com

Contact No. 9869845255

Date: 30.01.2021

For: The Magic Data, Mumbai

Signature: 

Name: Prashant Kandelkar

Designation: Director – Marketing & Sales

Address: Rahatani, Pune

Email id: consultant@themagicdata.com

Contact No. + 91 9324561456

Date 30.01.2021

Annexure-I

Data Science Using R:

Duration: – 30 Hrs (Time table will be designed in consultation with college)

Mode: Online

Course Structure:

Topics	Content
Basic of R	1. R Syntax 2. Working with different collection objects
R IDE important packages Basic Operation in R Various Data Types in R	1. R Studio IDE 2. Important Packages. And how to install / update them. Make a tabular representation for which package does what 3. Run through various data types using example Special Focus: Dataframe. Also show them <code>cut()</code> function.
User Defined Function and Data Management in R	1. Loop structure. 2. Creating functions. a. Use <code>apply()</code> for creating function using one example. 3. Difference between <code>lapply()</code> , <code>sapply()</code> and <code>apply()</code> built-in function (not covered in this ppt) 4. Regex quick run through. 5. Explain <code>sub()</code> , <code>gsub()</code> and other string manipulation techniques. Use <code>stringr()</code> library.
Data Science using R	1. Hypothesis testing 2. Explain ANOVA both one way and two way 3. Probability and Distribution- Normal, Poisson. 4. Correlation and Dimension Reduction 4. Machine Learning Algorithms (Supervised and unsupervised) such as Linear regression, Naïve byes, Decision Tree, Ensemble algorithms using R
Basic Graphics Using R	1. Show how to create bar graph, pie chart, scatter plot and BW Plot 2. Use a .csv file (medical.csv) and show each types of graph accordingly

Training Program Fees (Agreed Between both the parties): 50,000 INR

Annexure-II

DECLARATION REGARDING NON-REGISTRATION UNDER CGST/ SGST/ IGST

Date: 21-Jan-2021

To,

Karmaveer Bhaurao Patil College

PKC Road, Sector 15-A, Juhu Nagar,

Vashi, Navi Mumbai,

Maharashtra 400703, India

Dear Sir/Madam,

We have received your communication asking us to provide our GST registration details such as GST registration number, GST registration certificate and registered address/addresses.

1. In this regard, we hereby declare and affirm that we have not registered under the GST Act, since we are not required to do so, for the reason of turnover in state below taxable limit. Accordingly, we shall not charge CGST/SGST/IGST to Karmaveer Bhaurao Patil College, either now or in the future, for the period for which we have not registered in the GST portal.
2. We further undertake to immediately inform you regarding any changes to any of the aforesaid particulars. In cases where specific registration numbers have been applied for but have not been obtained, we shall furnish copies of the application for registration so made & shall also furnish the registration, immediately upon receipt of the same. Notwithstanding this declaration, Karmaveer Bhaurao Patil College may, at its sole discretion, require confirmations or any similar documentation or information and we agree to co-operate with all such requests in this regard.
3. We declare that all the above information is true, correct and complete, to the best of our knowledge and belief. Accordingly, we understand that Karmaveer Bhaurao Patil College is entitled to place reliance on the documents submitted by me/us in good faith.
4. We also understand that quoting of any false information in this declaration shall render me/us liable for all applicable legal and penal consequences, for which I/we shall be solely responsible.

We request you to treat this communication as a declaration regarding non-requirement to be registered under the Act.

Thanks & Regards,

Pradeep Khare

Trainer, The Magic Data, Mumbai



Rayat Shikshan Sanstha

Rayat Shikshan Sanstha's
Karmaveer Bhaurao Patil College, Vashi
(Autonomus College)



Sector – 15 A, Vashi, Navi Mumbai – 400 703

Reaccredited by NAAC with A+ Grade, CGPA 3.53

ISO 9001:2015 Certified Institute "Best College Award" by University of Mumbai

CERTIFICATE OF COMPLETION

Department of Computer Science in collaboration with



The Magic Data

Organized

Short Term Course on Data Science Using



(Under The Aegis of RUSA)

This is to certify that **ADARSH SALUNKHE** of **KBP College, Vashi**

has successfully completed this training on **Wednesday, February 17, 2021**

Dr. Manisha Abhyankar

HOD, Computer Science, KBP College, Vashi

Pradeep Khare

Director, The Magic Data, Mumbai

Dr. Shubhada Nayak

I/C Principal, KBP College, Vashi