

Data Analysis with R Programming

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```
operation == "MIRROR_X":  
    mirror_mod.use_x = True  
    mirror_mod.use_y = False  
    mirror_mod.use_z = False  
operation == "MIRROR_Y":  
    mirror_mod.use_x = False  
    mirror_mod.use_y = True  
    mirror_mod.use_z = False  
operation == "MIRROR_Z":  
    mirror_mod.use_x = False  
    mirror_mod.use_y = False  
    mirror_mod.use_z = True
```

```
#selection at the end -add  
mirror_ob.select= 1  
modifier_ob.select=1  
context.scene.objects.active  
("Selected" + str(modifier  
mirror_ob.select = 0  
= bpy.context.selected_object  
data.objects[one.name].select  
print("please select exactly
```

OPERATOR CLASSES -----

```
types.Operator):  
    on X mirror to the selected  
    object.mirror_mirror_x"  
    mirror X"
```

Course Outcomes

- In this course, you'll learn about the programming language known as R. You'll find out how to use RStudio, the environment that allows you to work with R. This course will also cover the software applications and tools that are unique to R, such as R packages.

Data Analysis

- Data analysis is the process of cleaning, changing, and processing raw data and extracting actionable, relevant information that helps businesses make informed decisions.

Programming with R

- R is a programming language that can help you in your data analysis process.
- RStudio is the environment you'll use to work in R.
- Using R can help you complete your analysis efficiently and effectively.
- The R programming language was designed to work with data at all stages of the data analysis process.

Why R ?

- R is free and open source, so it is widely accessible
- It has a large and active user community, so there are many resources available for learning and troubleshooting
- R has a vast number of libraries and packages available for statistical computing and data analysis

Data Wrangling with R

- Also known as **data munging**, is the process of cleaning and transforming raw data into a format suitable for analysis
- It involves tasks such as removing duplicates, filling in missing data, and transforming data types (**vectors, matrices, arrays, data frames, and lists**)
- Wide range of functions for manipulating data, such as subsetting, merging, and transforming data frames (**Tidyverse: dplyr and tidyr**)

Data Visualization with R

- Why visualize data? (understand data: identify patterns, trends, and outliers in the data)
- Different types of plots in R programming (Histogram, Scatter Plot , Box Plot, ...)
- How to create visualizations using R programming? (Tidyverse: ggplot2 and plotly)

Machine Learning with R

- Machine Learning (learn from data and make predictions or decisions without being explicitly programmed)
- Wide range of libraries in R (caret, mlr, and randomForest)

Completion

The screenshot shows a web browser window displaying the Coursera course completion page for 'Foundations: Data, Data, Everywhere' by Google. The browser's address bar shows the URL <https://www.coursera.org/learn/foundations-data/home/week/1>. The page features a sidebar on the left with the Google logo, the course title 'Foundations: Data, Data, Everywhere', and a 'Course Material' section listing weeks 1 through 5, all marked as completed with green checkmarks. Below this are links for 'Grades', 'Notes', 'Discussion Forums', and 'Messages'. The main content area on the right includes a 'Congratulations on getting your certificate!' message, stating 'You completed this course on June 2, 2021' with a grade of 92.50%. It provides buttons to 'Share Certificate' and 'Download certificate'. Below this is a 'Rate this course' section with a star rating and a 'Rate this course' link. A recommendation section follows, stating 'You've completed the Foundations: Data, Data, Everywhere specialization! Based on the skills you learned, you may find these courses helpful', featuring a course titled 'System Administration and IT Infrastructure Services' by Google with a 5-star rating. At the bottom, a section titled 'Introducing data analytics' shows progress for 'All videos completed', 'All readings completed', and 'All graded assessments completed'. The Windows taskbar at the bottom indicates the time is 6:52 PM on 5/12/2023.

Conclusion

- Summary of the course
- Future scope of data analytics with R programming
- Resources for further learning
(**Google Data Analyst Profession Certificate**)

Thank You !!!