DataScienceEcosystem

March 13, 2025

Exercise 2 - Create a markdown cell with the title of the notebook.

1 Data Science Tools and Ecosystem

Exercise 3 - Create a markdown cell for an introduction. (1 pt)

Introduction to the course In order to be successful in *Data Science*, you need to be skilled with using tools that Data Science professionals employ as part of their jobs. This course teaches you about the ***popular tools in Data Science*** and how to use them.

Exercise 4 - Create a markdown cell to list data science languages.

2 Data Science Languages

1. Python
2. R
3. Java
4. C/C++
5. Scala
6. Julia
7. Matlab
8. SQL

Exercise 5 - Create a markdown cell to list data science libraries. (3 pts)*

2.1 Data Science libraries againts different languages

2.1.1 Python

- Scientific Computing Libraries - Pandas, Numpy
- Visualization Libraries in Python - Matplotlib, Seaborn
- Machine learning and Deep Learning libraries in Python - Scikit-learn
- Deep learning libraries - Tenor.flow, Apache spark

2.1.2 R

- Data manipulation - dplyr
- String manipulation - stringr
- Data visualization - ggplot
- Machine learning - caret

Exercise 6 - Create a markdownn cell with a table of Data Science tools. (3 pts)

Data Science tools
R studio
Jupyter notwbook
Tableau

Exercise 7 - Create a markdown cell introducing arithmetic expression examples

2.1.3 Below are a few examples of evaluating arithmetic expressions in Python.

```
[1]: # Exercise 8 - Create a code cell to multiply and add numbers

#This a simple arithmetic expression to multiply, then add integers

(3*4)+5
```

[1]: 17

```
[2]: #Exercise 9 - Create a code cell to convert minutes to hours

# This will convert 200 minutes to hours by diving by 60

200/60
```

[2]: 3.3333333333333335

Exercise 10 - Insert a markdown cell to list Objectives

Objectives:

- Learn about different open source data science tools
- Introduction to Languages in Data Science
- Libraries used for data science in R and Python
- Diving into Application Programme Interface
- Some Datasets Powering Data science

Exercise 11 - Create a markdown cell to indicate the Author's name

2.2 Author

Vaishnavi Haripuri