Introduction to Python for Data Science

DSECLPFDS

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Agenda

1) Visualizations using Seaborn
2) Recorded Video for later use: Introduction to Scikit-learn
3) Summary
4) Way ahead Q&A
5) Feedback

Matplotlib Pyplot

- Matplotlib is a low level graph plotting library in python that serves as a visualization utility.
- Most of the Matplotlib utilities lies under the pyplot
- https://matplotlib.org/stable/api/_as_gen/matplotlib.pyplot.plot.html
- Let's try some small plots
- Tomorrow we shall use the bike dataset and plot some more plots ..

Seaborn

Seaborn is a Python data visualization library based on matplotlib. It provides a high-level interface for drawing attractive and informative statistical graphics.

https://seaborn.pydata.org/

Characteristics	Matplotlib	Seaborn
Use Cases	Matplotlib plots various graphs using Pandas and Numpy	Seaborn is the extended version of Matplotlib which uses Matplotlib along with Numpy and Pandas for plotting graphs
Complexity of Syntax	It uses comparatively complex and lengthy syntax.	It uses comparatively simple syntax which is easier to learn and understand.
Multiple figures	Matplotlib has multiple figures can be opened	Seaborn automates the creation of multiple figures which sometimes leads to out of memory issues
Flexibility	Matplotlib is highly customizable and powerful.	Seaborn avoids a ton of boilerplate by providing default themes which are commonly used.

Scikit-learn

- Scikit-learn (Sklearn) is the most useful and robust library for machine learning in Python. It provides a selection of efficient tools for machine learning and statistical modeling including classification, regression, clustering and dimensionality reduction via a consistence interface in Python. This library, which is largely written in Python, is built upon NumPy, SciPy and Matplotlib.
- https://scikit-learn.org/stable/

Summary

1) Python Basics
2) Python Data Structures
3) Python Programming Constructs
4) Functions and Files
5) NumPy
6) Pandas
7) Data Exploration – Bike dataset
9) Matplotlib
10) Seaborn

Journey ahead …

1. Mentally Prepare Yourself
2. Research Exclusively On Significant Topics
3. Develop Self-Confidence Solving Tasks
4. Spend Time Analyzing Complex Problem Statements
5. Work On Improving Specific Math And Programming Skills
6. Try Numerous Visualization Techniques
7. Dedication And Persistence
8. Ask For Help When Required
9. Read Research Papers
10. Take Breaks
11. Stay Updated
12. Understand The Purpose Of Your Codes
13. Try Various Architectures, Models, Optimizers, etc.
14. Just Explore And Have Fun
15. Keep Up The Practice!

Credits: Bharath K

Post your queries in the Discussion Forum!!
All the best for your upcoming semesters ☺

Feedback

 : 5

 : 3

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Thank You for your time & attention !

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