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S6-IT

ITT 306 - Data science

? why Python Data analysis

1. Ease of Learning

python has a simple and readable syntax, mating it accessible for beginners. It's easy to understand and write ade, which reduces the learning curve for data analysis tasks.

2. Rich Ecosystem

Python has a vast ecosystem of libraries and framworks specifically designed for data analysis, such as pandas, numpy, mat Plotlib, and scipy. These libraries provide powerful fools for data manipulation, visualization, and statistical analysis.

3. versatility

python pavesatile language that can be used for various purposes beyond data analysis, including web development, automation, machine learning, and more. This versatility makes it a valuable still for professionals in various fields.

4. community support

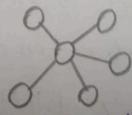
python has a large and scientists who anto ibute to opensource projects and provide support through forums, tutorials, and documentation. This community-driven approach ensures that there are resources available for solving almost any tata analysis problem.

5. Integration

python integrates well with other technologies and tooks commonly used in data analysis, such as databases, church services, and big data platforms. This interoperability allows data scientists to seamlessly incorporate python into their texts to seamlessly incorporate python into their existing work flows.



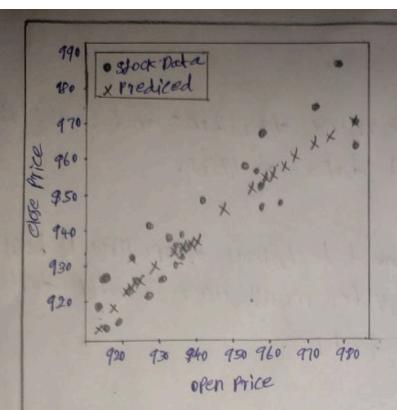
pata mining



pata modeling



pata Visualization



Q. Fundamental Python libraries for data science.

1. Numpy

For numerical computing and handling arrays and matrices.

2. Pandas

For Lata manipulation and analysis, especially with structured data.

3. mat Ploth b

For creating static, interactive, and animated visualizations in Python.

4. seaborn

Built on do P of matPlotlib, it Provides a highlevel interfac for drawing attractive and informative

3

Statistical graphics.

5. Scitist-learn

For machine lead

data mining and

6. Scify

For scientific of

on Numpy and pro

For machine learning algorithms and bools for data mining and data analysis.

For scientific and technical amouting. It builds on numby and provides many user-friendly and efficient numerical routines.

7. Stat models

For Statistical modeling and hypothesis testing.

activities are corried out

used to manifulate soft-A impayou library for Structured daya, learn creating n-dimesional arrays pondas Numey Beautiful soup Tensor flow is free and Python is a python ofen-source end-to-and Libraries library Inatseasiful TENORFLOW for platform for developing exmays datasoup pata Analysis machine Learning from HTML and may plotlib applications. Scipy AML giles. wedwar Scientitic capabilities · Primarily used for KS & such as linear extebra virualization 1 grath and the four jer bronsform are Insersting for m of paya Provided Vistualization