



DATA ANALYTICS

INTRODUCTION

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TOPIC OUTLINE

Data Analysis, Data Analytics, Data Science

Data Analyst

Software Tools



DATA ANALYSIS, DATA ANALYTICS, DATA SCIENCE



DATA ANALYSIS

Data analysis is the process of inspecting, cleaning, transforming, and modeling past data to uncover trends, patterns, and insights that inform decision-making.

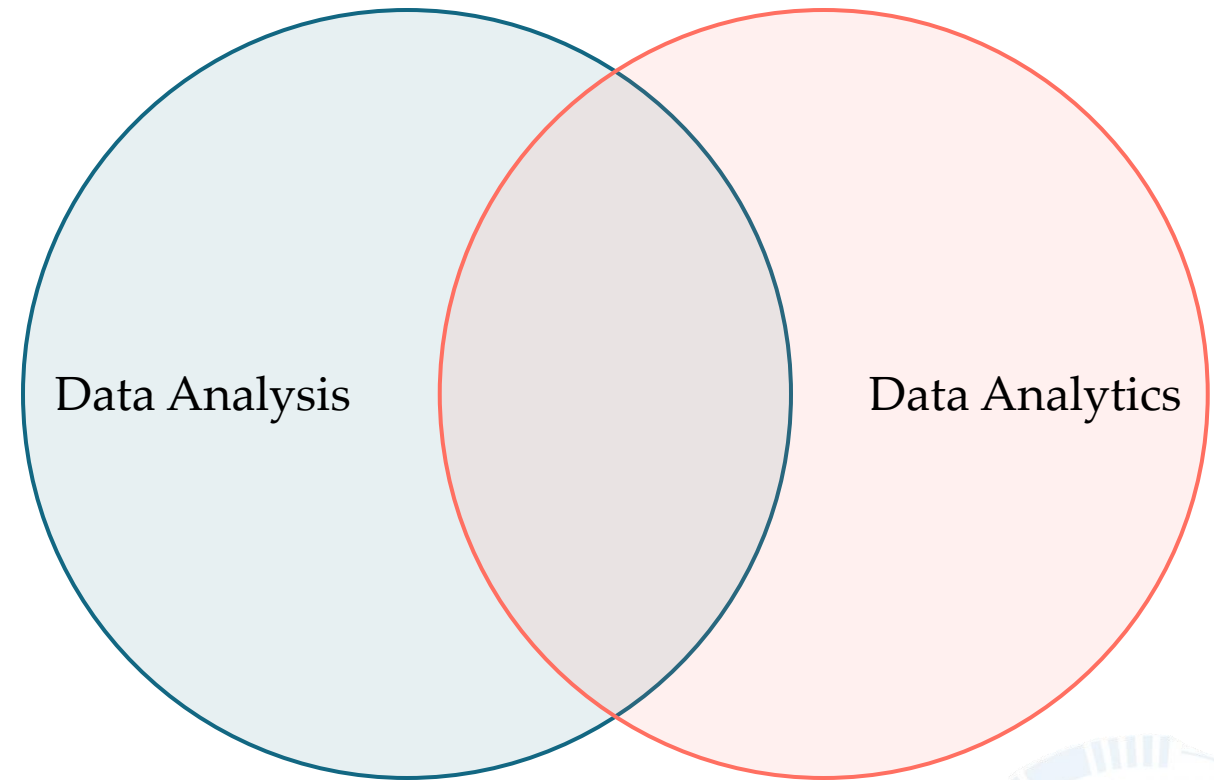


Data Analysis



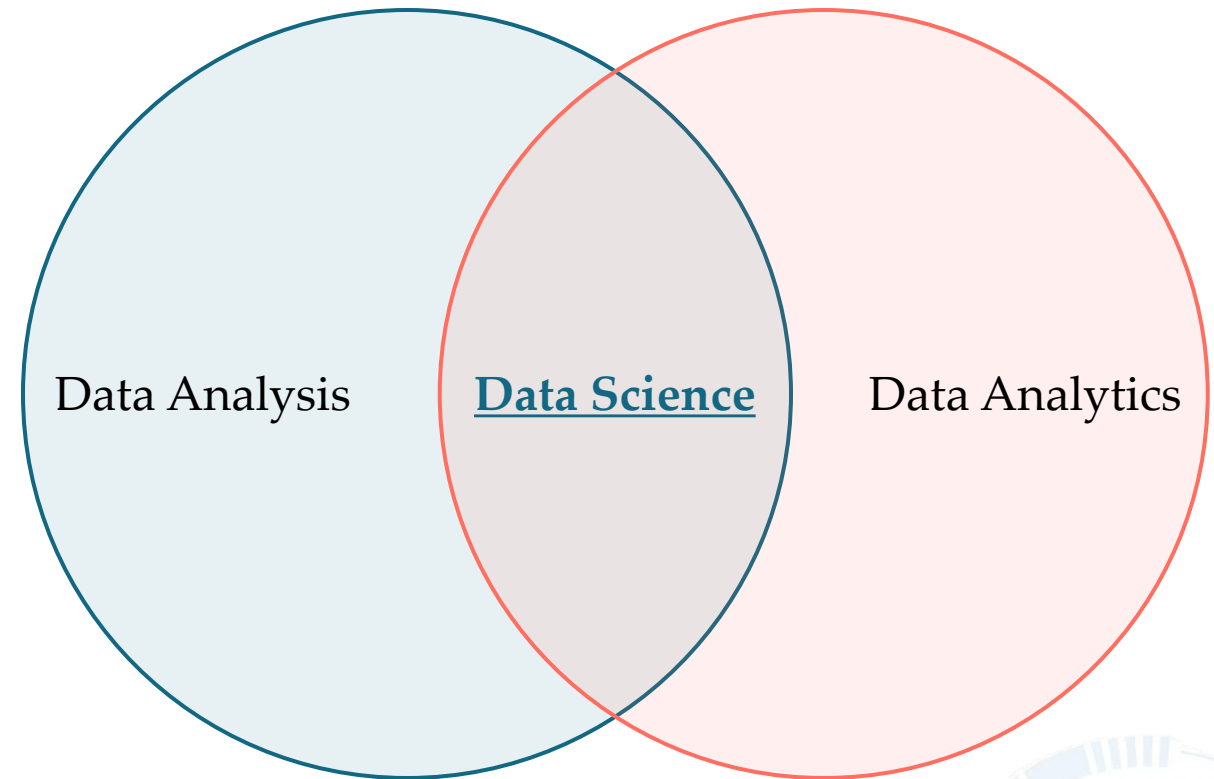
DATA ANALYTICS

Data analytics is the process of examining past and current data to identify trends, patterns, and insights, with a focus on using predictive models and techniques to forecast future outcomes and inform strategic decision-making.



DATA SCIENCE

Data science is the combination of data analysis and data analytics, integrating advanced techniques like machine learning and statistical modeling to extract insights, identify patterns, and predict future outcomes.

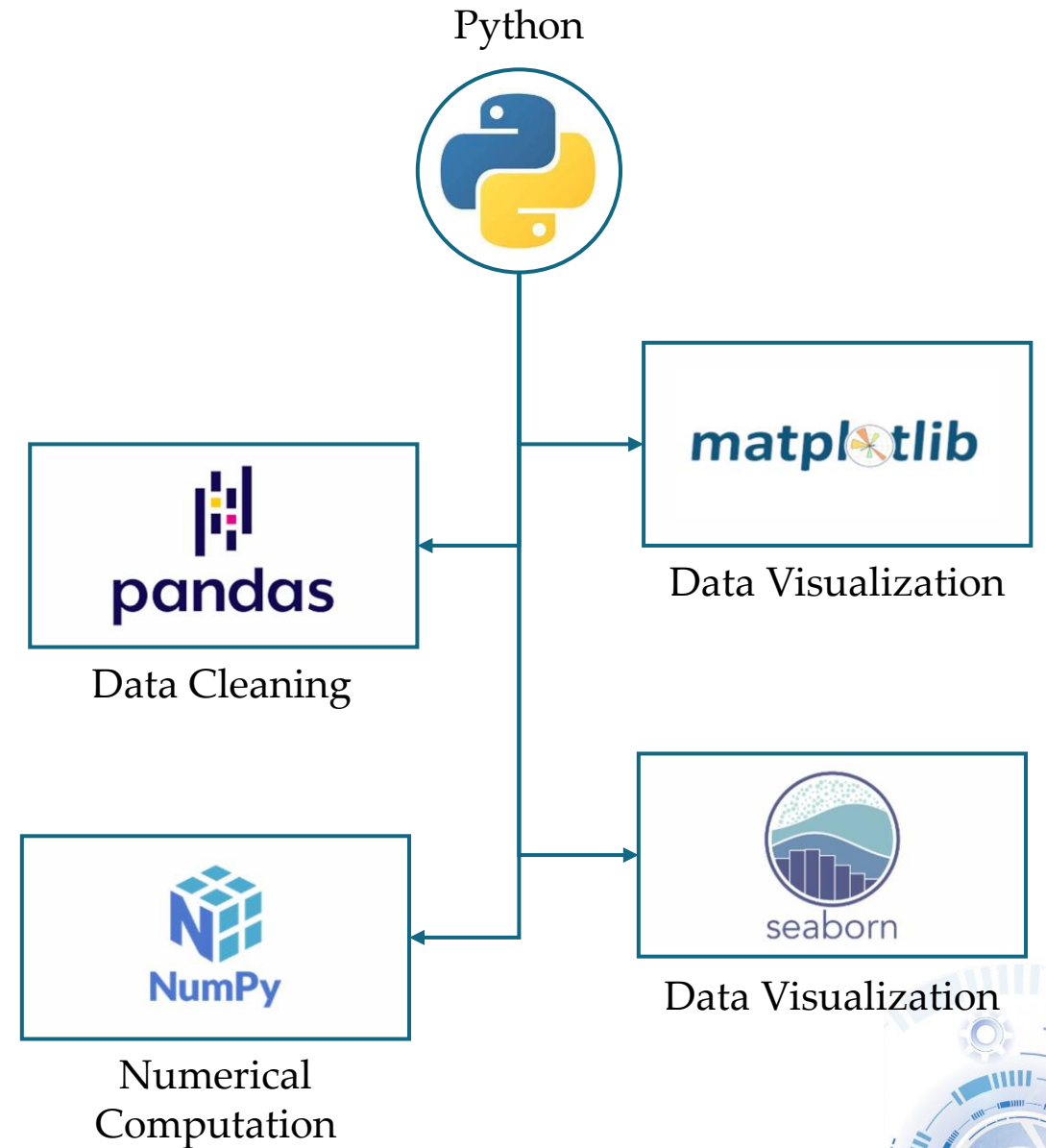


DATA ANALYST

A data analyst is a professional who specializes in collecting, processing, and analyzing data to uncover trends, patterns, and insights that inform decision-making.

Key Skills:

- Quantitative Skills – Mathematics and Statistics
- Technical Skills – Programming Languages



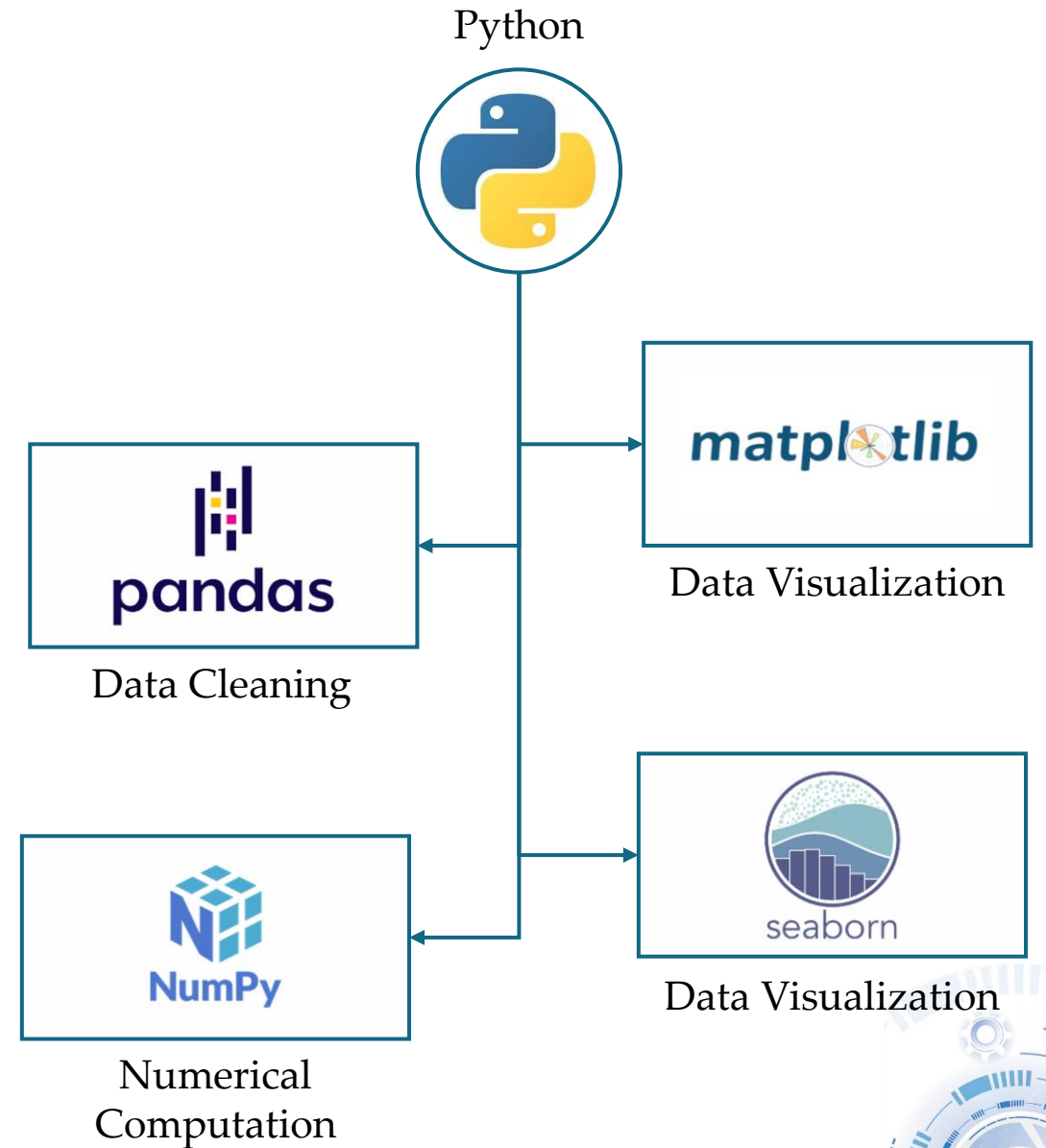
<https://www.python.org/>

SOFTWARE TOOLS



PYTHON

Python is a powerful and versatile programming language widely used in data analytics due to its simplicity, readability, and **extensive library support**. It enables data analysts to perform various tasks, from data cleaning and manipulation to statistical analysis and visualization.



<https://www.python.org/>

SOFTWARE TOOLS

1. Visual Studio Code

<https://code.visualstudio.com/Download>



Visual Studio Code

2. Python

<https://www.python.org/downloads/>



3. Jupyter Notebook Extension on VS Code



4. numpy, pandas, scipy, matplotlib libraries

5. Github Account

<https://github.com/>



6. Git Bash

<https://git-scm.com/downloads/win>



LABORATORY

