

Python Basics

By

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- Python features
- Basics
- Function
- Libraries
- Data Preprocessing/Manipulation
- Data Analysis/Plotting

Python features

- Easy and simple to learn
- Run on different platforms
- Easy way of data manipulation, analysis and visualization
- Support of libraries
- Open Source

Basics

- Different IDEs for Python: Atom, PyCharm, Visual Studio Code, Spyder, Jupyter, etc.
- Online Compiler: Google Colab, online Python Compiler, etc.
- Import libraries to use functions
- No need to define data type of variable
- Normal arithmetic

- # Numeric Data Types (Int, Float, Complex)
- # String Data Type
- # List
- # Tuple
- # Dictionary
- # Conditional statements
- # logical AND OR NOT

- # loops
- # Functions

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Libraries

- Main libraries used for Data Science



NumPy



Pandas

Numpy

- Fundamental package for scientific computing with Python

We will discuss/Implement

- Arrays
- Array Creation & Manipulation
- Array Operations

Pandas

- Fundamental package for Data and Data Frame manipulation

We will discuss/ Implement

- Creating a Data Frame
- Data Selection, adding & deleting data
- Calculations over data

- Data Preprocessing/Manipulation

Numpy

Pandas

- Data Analysis/Plotting

matplotlib

seaborn

Titanic Dataset (891 x 12)

| Passenger Id | Survived | Pclass | Name | Sex | Age | SibSp | Parch | Ticket | Fare | Cabin | Embarked |
|--------------|----------|--------|----------------------------|--------|------|-------|-------|-----------|---------|-------|----------|
| 1 | 0 | 3 | Braund, Mr. Owen Harris | male | 22.0 | 1 | 0 | A/5 21171 | 7.2500 | NaN | S |
| 2 | 1 | 1 | Cumings, Mrs. John Bradley | female | 38.0 | 1 | 0 | PC 17599 | 71.2833 | C85 | C |