**PYTHON LIBRARIES**

**Data Analysis & Manipulation**

1. **Pandas** – Data manipulation and analysis using dataframes (like Excel in Python).
2. **NumPy** – Efficient numerical computing with support for large, multi-dimensional arrays and matrices.
3. **Dask** – Parallel computing for large datasets, similar to Pandas but designed for scalability.

### ****Data Visualization****

1. **Matplotlib** – 2D plotting library for creating static, animated, and interactive plots.
2. **Seaborn** – Statistical data visualization built on top of Matplotlib.
3. **Plotly** – Interactive, web-based visualizations; supports charts like line, bar, and 3D plots.

### ****Machine Learning & AI****

1. **Scikit-learn** – Tools for classical machine learning models like regression, classification, clustering.
2. **TensorFlow** – Open-source deep learning library developed by Google.
3. **PyTorch** – Deep learning framework developed by Facebook, popular for research and production.

### ****Web Development****

1. **Flask** – Lightweight web framework for building web applications and APIs.
2. **Django** – High-level web framework that encourages rapid development and clean design.

### ****Testing & Automation****

1. **pytest** – Framework for writing simple and scalable test cases.
2. **Selenium** – Automation of web browsers for testing web applications.

### ****APIs & Networking****

1. **Requests** – Simplifies making HTTP requests (GET, POST, etc.).
2. **FastAPI** – High-performance framework for building APIs with Python 3.6+ based on type hints.