# Lesson 3: Pandas

# Course Agenda

- Python Crash Course
- Data Analysis:
  - NumPy
  - Pandas
- Data Visualization:
  - Matplotlib
  - Seaborn
  - Pandas
  - Plottly and Cufflinks
  - Geographical Plotting

- Machine Learning
  - Linear Regression
  - Logistic Regression
  - K Nearest Neighbors
  - Decision Trees and Random Forests
  - Support Vector Machines
  - K Means Clustering
  - Recommender Systems

#### **Pandas**

- Pandas is an open-source library built on top of NumPy
- It allows for fast analysis and data cleaning and preparation
- It excels in performance and productivity.
- It also has built-in visualization features.
- It can work with data from a wide variety of sources.

#### **Pandas Installation**

If you use Anaconda distribution, it is most likely you have pandas installed.

Otherwise, you'll need to install pandas by going to your command line or terminal and using either:

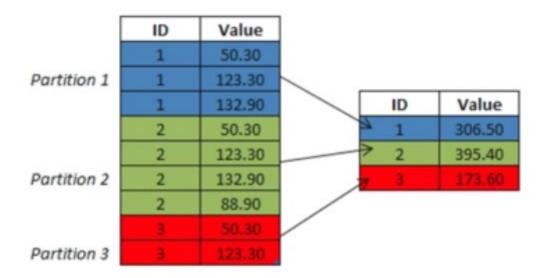
conda install pandas pip install pandas

# Pandas Agenda

- Series
- DataFrames
- Missing Data
- GroupBy
- Merging, Joining, and Concatenating
- Operations
- Data Input and Output

# Groupby

 Groupby allows you to group together rows based of of a column and perform an aggregate function on them.



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