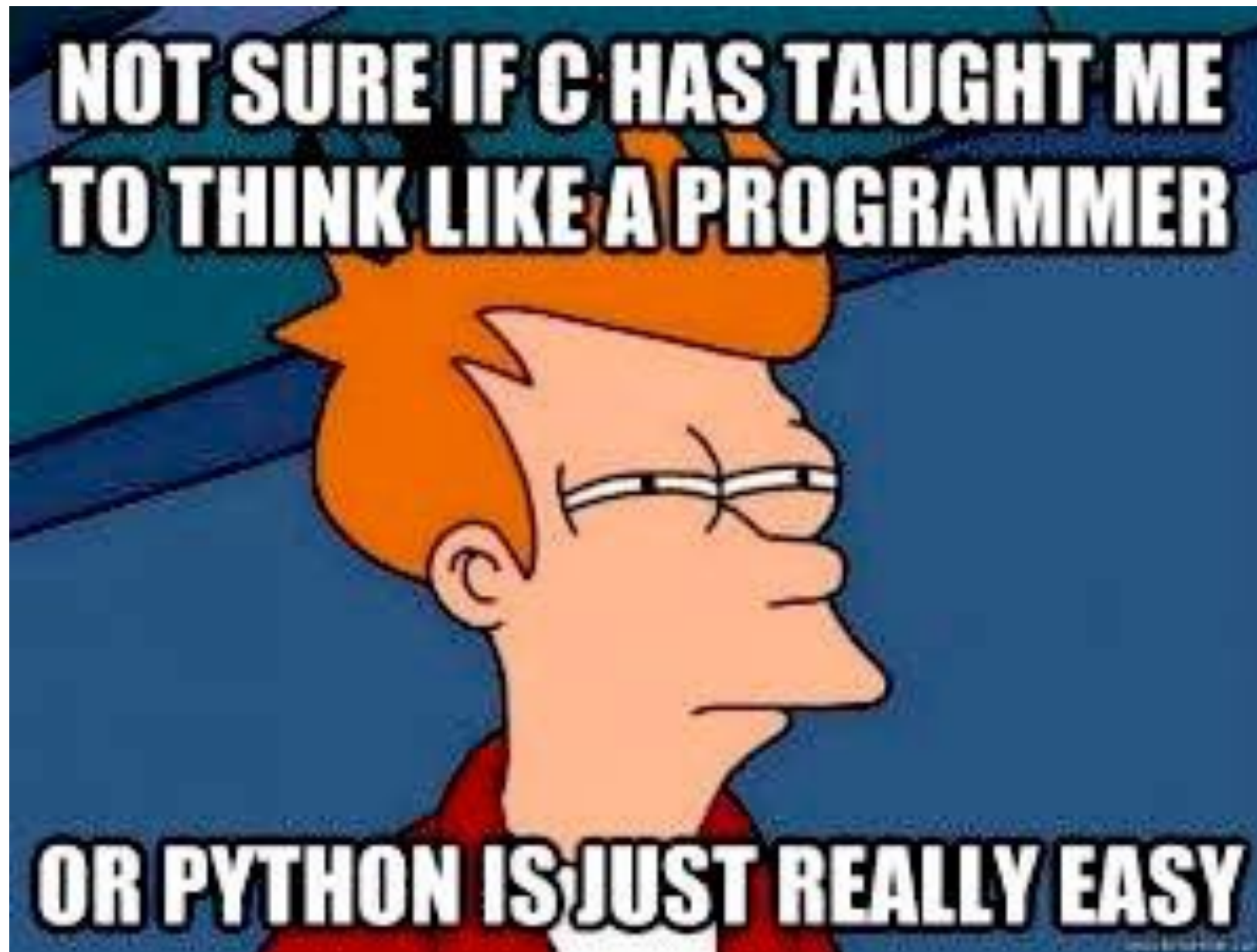


INTRODUCTION TO PYTHON

NON PRIMITIVE DATATYPES

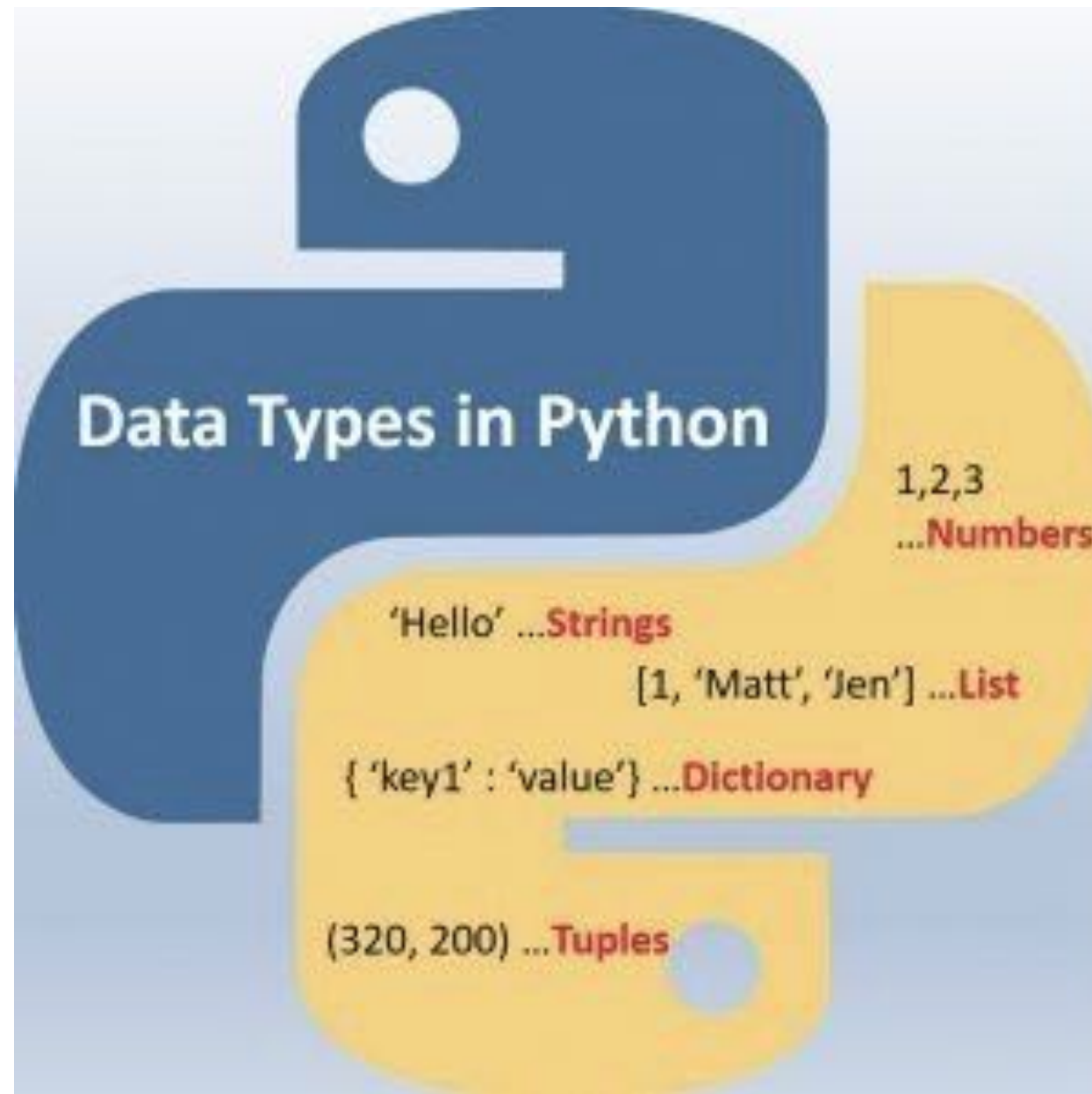


<https://www.youtube.com/watch?v=WhUJfvSgxEl>

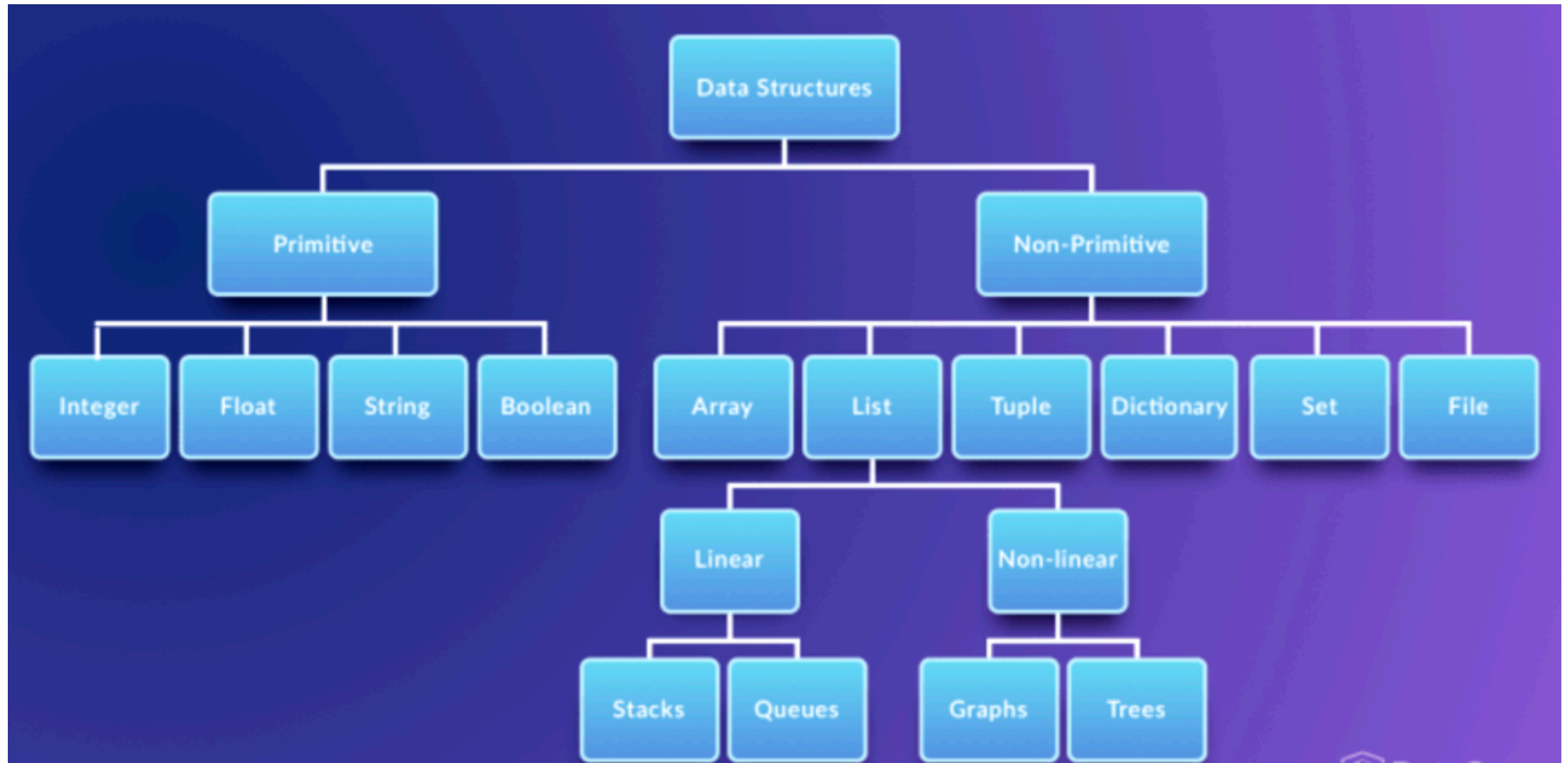
OBJECTIVES

- Describe the difference between primitive and non-primitive data structures
- Perform data handling with Python lists by Storing, accessing and manipulating information in a list structure.
- Perform data handling with Python dictionaries by Storing, accessing and manipulating information in a dictionary structure.
- Demonstrate the ability to data from external sources into Python environment
- Compare and contrast use cases for lists and dictionaries in python

DATA TYPES IN PYTHON



PRIMITIVE AND NON PRIMITIVE DATA TYPES



PRIMITIVE DATA TYPES

PRIMITIVE DATA TYPES

- A primitive data type is one that fits the base architecture of the underlying computer such as int, float, and pointer, and all of the variations, thereof such as char short long unsigned float double and etc, are primitive data type.
- Primitive data are only single values, they have not special capabilities.
- The examples of Primitive data types are given int, float, string, boolean etc.
- The integer reals, logic data character data pointer and reference are primitive data structures data structure that normally are directly operated upon by machine level instructions are known as primitive structure and data type.

NON PRIMITIVE DATA TYPES

- ▶ Data types built on top of primitive data types for advanced computation, such as an array structure or class is known as the non-primitive data type.
- ▶ These data type that are derived from primary data types
- ▶ The non-primitive data types are used to store the group of values.
- ▶ Examples of non-primitive data type.
- ▶ Array, lists, dictionaries, sets, stacks, queue etc.

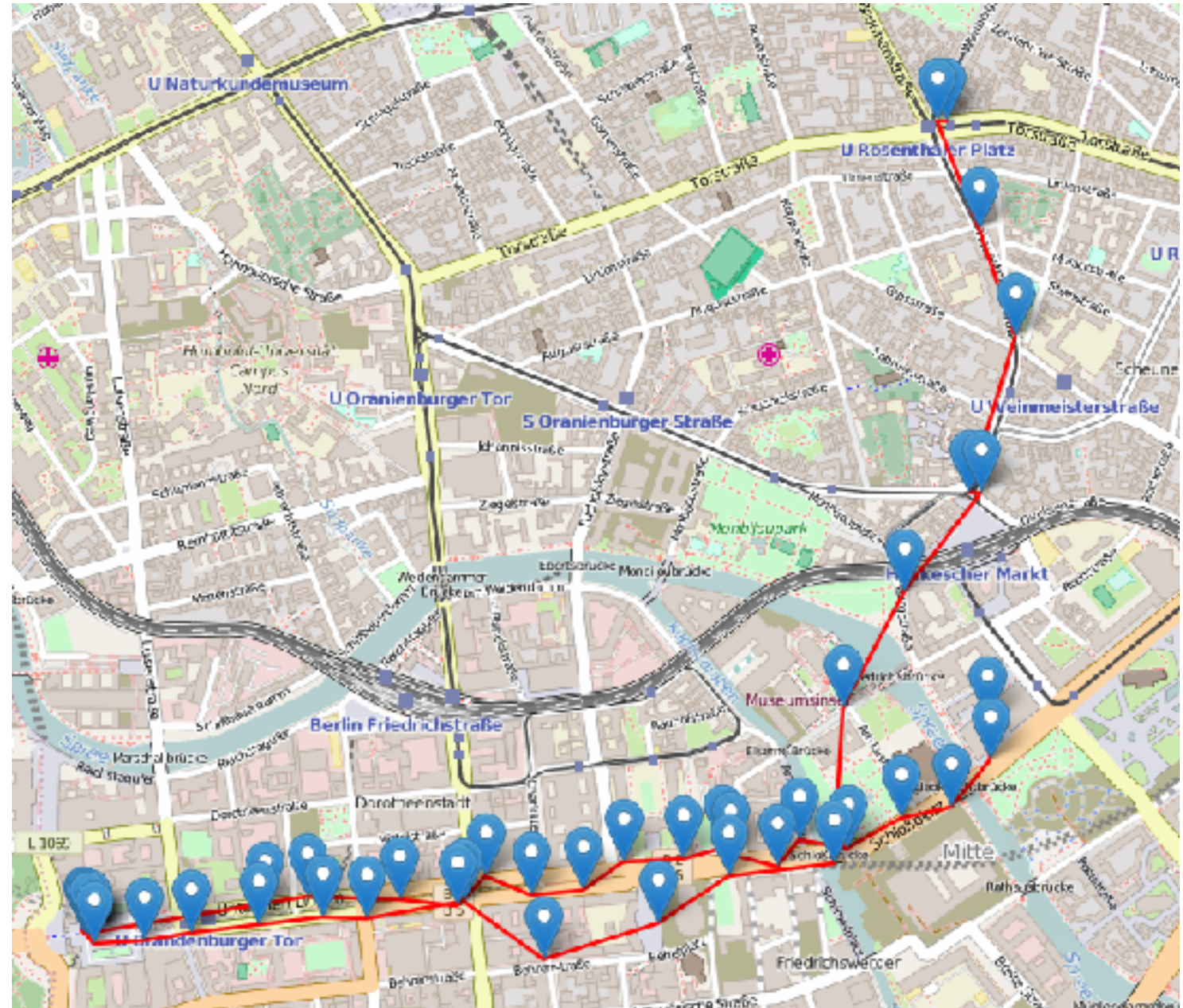
(further details here)

<https://www.datacamp.com/community/tutorials/data-structures-python>

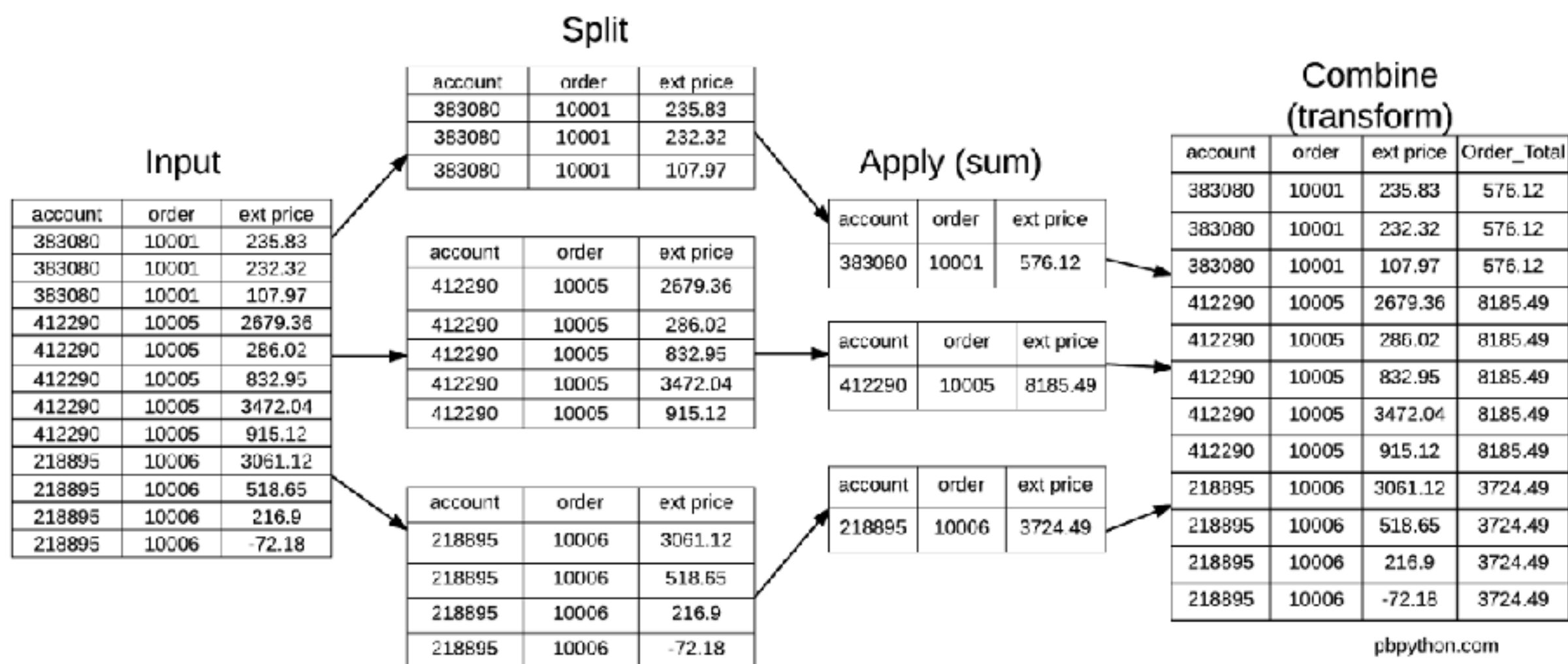
<https://code.tutsplus.com/articles/advanced-python-data-structures--net-32748>

FOLIUM

- ▶ Create geographical visualisations
- ▶ Choropleth maps (binding data to maps)
- ▶ Adding markers on maps
- ▶ Works with OpenStreetMap, Mapbox, Stamen APIs
- ▶ Interactivity (Zoom in and out)



PANDAS





Data Exploration in Python **USING**

NumPy

NumPy stands for Numerical Python. This library contains basic linear algebra functions, Fourier transforms, advanced random number capabilities.

Pandas

Pandas for structured data operations and manipulations. It is extensively used for data munging and preparation.

Matplotlib

Python based plotting library offers matplotlib with a complete 2D support along with limited 3D graphic support.

