**Day 5:**

**Python library**

NumPy (Numerical Python) : it is core python library for

1. Fast numerical computation
2. Handling large multi dimensional array
3. Perform some maths operation in efficient way.

List

Set

Tuple

Dictionary

**List Vs NumPy**

|  |  |  |
| --- | --- | --- |
| **Features** | **List** | **NumPy** |
| Data types | Mixed value | Same data types values |
| Speed | Using loop we can retrieve | Faster (C-base operation) |
| Memory | Slower because depends upon the loop | It use less memory |
| Vectorization | Not support. We need to use loop | Support not required loop |
| Broadcasting | Not support | Support |
| Maths | Doesn’t support directly | Work directly |

Broadcasting : Broadcasting allow numPy to perform on array of different shapes.