# Prerequisites

## NumPy

* The fundamental package for scientific computing with Python
* Check installations
  + Go to terminal and execute below command:

*python -m pip show numpy*

* In two dimensional arrays, all the sub arrays should have same size and data types should be homogeneous

np.array([[1.1, 1.1], [2.2, 3.3]])

# Notes:

* Types of learning
  + **Reward based learning:**

Entity gets trained to perform certain actions. Once the actions is performed by the entity then entity gets some reward. Entity remembers after performing tasks reward will be obtained.

* + Generalized learning:

Learning from one event can be applied to other similar events. This type of learning is called generalized learning.

* Segments of Artificial Intelligence:
  + Machine Learning

Purpose of machine learning to predict result at certain situation after being trained by another situation.

* + - Deep Learning

Neural networks are part of deep learning.

Neural networks resemble the human brain.

* + NLP / Natural Language Processing:

Ability to communicate with computer with human understandable language.

* + Computer vision
  + Robotics:

Union of software and hardware

# Resources:

* NumPy tutorial: <https://youtu.be/QUT1VHiLmmI>