

# Introduction to Numpy

Learn how to use the Numpy library to build powerful arrays!

# What is Numpy?

- Numpy is a library containing data structures and functionality that allow for the usage of powerful and functional arrays and matrices
- Numpy arrays and matrices are widely used in data science, machine learning, game development, and anywhere else a coder wants a more powerful array

# Why learn Numpy?

- Numpy arrays are many times faster than regular lists in Python
- Numpy arrays have a ton of extra functions built into the data structures that make for highly efficient mathematical computations
- Numpy arrays are widely used in many prominent and upcoming fields so knowing how to use them will be highly advantageous
- For those who want to go into data science, machine learning, or other related fields, learning Numpy is a must!

# Who is this course for?

- People who are completely new to Numpy
- People without much experience working with matrices or specialized arrays
- People who have some experience with Python
- Especially useful for those who want to go on to data science or machine learning fields

# Which topics will we cover?

- Downloading and installing Anaconda and Jupyter
- Numpy arrays:
  - Creating numpy arrays
  - Fetch operations
  - Modification operations
- Numpy matrices:
  - Creating numpy matrices
  - Fetch operations
  - Modification operations