

### Python Basics

Videos Covered: Variables, Types, Lists, Arrays

#### **Practice Tasks:**

- 1. Create a program that stores your name, age, and favorite programming language.
- 2. Make a list of 5 numbers. Write code to:
  - Find the sum
  - Find the average
  - Sort the list

# Functions (Parts 1-3)

### **Practice Tasks:**

- 1. Write a function that calculates the square of a number.
- 2. Write a function that takes two numbers and returns their sum, product, and difference.
- 3. Create a function that checks if a number is even or odd.

# **Modules and Imports**

#### **Practice Tasks:**

- 1. Import the math module and use it to:
  - Find the square root of 64
  - Get the value of pi
- 2. Use random to generate a list of 5 random numbers between 1 and 100.

# Objects, Attributes & Methods

#### **Practice Tasks:**

- 1. Create a simple class Car with attributes make, model, and year.
- 2. Add a method that prints the car's full description.
- 3. Create 2 different car objects and call the method.

### Data Visualisation + Docs

#### **Practice Tasks:**

- 1. Import matplotlib.pyplot and plot:
  - A line graph showing temperature over 7 days
  - A bar chart showing your weekly expenses
- 2. Practice reading Python documentation for matplotlib.pyplot.plot().

# Code Style & Naming

#### **Practice Tasks:**

- 1. Review one of your old Python scripts and:
  - Rename variables using snake\_case
  - Add comments where needed
  - Follow PEP 8 for indentation and spacing