

# How much Python you need?

## Basics of Python

- **Syntax and Basics:** Understanding Python syntax, variables, data types, and basic operations.
- **Control Structures:** Knowledge of if-else statements, loops (for and while), and handling exceptions with try-except blocks.
- **Functions:** How to define and use functions, understanding parameters, return values, and basic principles of functional programming.

## Intermediate Python

- **Data Structures:** Proficiency with lists, dictionaries, sets, and tuples for organising data.
- **Object-Oriented Programming (OOP):** Understanding classes, objects, inheritance, and polymorphism to structure your code more efficiently.
- **Modules and Packages:** Knowing how to import and use external libraries and modules, which is crucial for leveraging Python's extensive ecosystem.

## Python Libraries for AI and Data Science

- **NumPy and Pandas:** For handling numerical and tabular data, respectively. These are foundational for data manipulation in AI projects.

## Working with LLMs

- **API Requests:** Understanding how to make HTTP requests in Python since interacting with LLMs like OpenAI's GPT-3 often involves sending requests to an API.
- **JSON:** Knowing how to work with JSON data is essential for parsing the responses received from APIs.

## Building UIs with Gradio

- **Gradio Basics:** Learning how to use Gradio to create simple interfaces for your AI models. This includes understanding how to define inputs and outputs and configuring the interface elements.
- **Integrating AI Models:** Ability to integrate your AI models or third-party models with Gradio interfaces.

## Project and Environment Management

- **Version Control:** Basic understanding of version control with Git is beneficial for managing your code and collaborating with others.
- **Virtual Environments:** Knowledge of creating and managing isolated Python environments with virtualenv or conda is helpful for managing dependencies.

## Debugging and Testing

- **Debugging:** Skills to identify and fix issues in your code.
- **Testing:** Understanding of basic testing principles to ensure your code works as expected.