Python Workshop

Getting Started with Python Programming

📌 Workshop Agenda

- Introduction to Python
  - Installing Tools
  - Basic Syntax and Data Types
  - Writing Your First Program
  - Hands-on Practice
  - Q&A

What is Python?

- Python is a high-level, easy-to-read programming language.
- Created by Guido van Rossum in 1991. (https://www.youtube.com/shorts/FSAlUilQTwA)
- Popular in web development, data science, AI, and automation.

💡 Why Learn Python?

- Beginner-friendly syntax (looks like English).
- Huge community and library support.
- Used by companies like Google, Netflix, and NASA.
- Great for both small scripts and large applications.

🛠️ What Can You Build With Python?

- Web apps and APIs
- Data analysis and visualization
- Machine learning and AI models
- Automation scripts
- Games and desktop apps

How Python Code Runs

1. You write Python code (.py file or notebook).
2. Python interpreter reads it line by line.
3. Output appears on screen (e.g., print statements).

No need to compile – just run and see results!

🧰 Tools You'll Use

- Jupyter Notebook – great for learning and prototyping
- VS Code – powerful editor for larger projects
- Python 3 – the language itself!

👋 Your First Python Code

- Type this in your editor or notebook:

  print("Hello, world!")
- This is your first step into coding with Python.

📚 Workshop Format

- Short lessons + hands-on coding time
- Ask questions anytime
- No prior experience needed
- Let’s learn by doing!

❓ Any Questions Before We Start?

- Or… What’s your favorite animal? (Just to break the ice 😄)

Installation and version check

- Step 1: Make sure Python is installed
  python --version
- Step 2: Install pip (Python's package manager)
  pip --version
  python -m ensurepip –upgrade

Step 3: Create and activate a virtual environment (recommended)

python -m venv myenv

- Activate it:

On Windows:

- myenv\Scripts\activate

On Bash:

- source myenv/Scripts/activate

python

pip install pandas

Then run Python and test:

- import pandas
- print(pandas.__version__)

- **To deactivate:**

  deactivate