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Python Data Analysis Workshop

Python & Streamlit

Local Installation Guide

Version 1

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January 15, 2026

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This guide will help you set up Python and run the Streamlit dashboard on your computer.

1 Install Python

1. Go to python.org/downloads

2. Download **Python 3.10 or higher** (3.11 or 3.12 recommended)

3. Run the installer

> **Important (Windows):** Check the box **"Add Python to PATH"** during installation!

Verify installation: Open Terminal (Mac/Linux) or Command Prompt (Windows):

```
python --version
```

Expected output: `Python 3.12.0` (or similar)

2 Clone the Repository

Open Terminal/Command Prompt and run:

```
git clone https://github.com/tamagusko/lisbon-accidents-
    dashboard.git
cd lisbon-accidents-dashboard
```

> **Don't have Git?** Download it from git-scm.com/downloads or download the repository as ZIP from GitHub and extract it.

The repository structure:

```
lisbon-accidents-dashboard/
app.py                          # Streamlit dashboard
Python_Data_Analysis_Lesson.ipynb # Colab notebook
requirements.txt                # Dependencies
data/
Road_Accidents_Lisbon.csv    # Dataset
docs/
Tutorial_1_Google_Colab.pdf  # Colab guide
```

```
        Tutorial_3_Streamlit_Setup.pdf # This guide
```

3   Create Virtual Environment

A virtual environment keeps your project dependencies isolated.

3.1   Windows

```
python -m venv venv
venv\Scripts\activate
```

3.2   Mac / Linux

```
python3 -m venv venv
source venv/bin/activate
```

> **Success indicator:** When activated, you'll see (`venv`) at the beginning of your command line.

4   Install Required Libraries

Install all libraries from the requirements file:

```
pip install -r requirements.txt
```

This may take a few minutes.

5   Run the Dashboard

```
streamlit run app.py
```

The dashboard opens automatically at: **http://localhost:8501**
To stop: Press `Ctrl + C` in the terminal.

6   Quick Command Reference

Task	Command
Clone repository	`git clone https://github.com/tamagusko/lisbon-accidents-dashboard.g`
Activate env (Windows)	`venv\Scripts\activate`
Activate env (Mac/Linux)	`source venv/bin/activate`
Deactivate environment	`deactivate`
Install requirements	`pip install -r requirements.txt`
Run Streamlit	`streamlit run app.py`
Stop Streamlit	`Ctrl + C`

7   Troubleshooting

Problem: `geopandas` installation fails (Windows)
   Solution:

```
pip install wheel pipwin
pipwin install gdal fiona pyproj shapely
pip install geopandas
```

Problem: `streamlit` command not found
Solution: Ensure virtual environment is activated, or try:

```
python -m streamlit run app.py
```

Problem: "Module not found" error
Solution: Install the missing module:

```
pip install module_name
```

Remember: Always activate your virtual environment before working on the project. If you close the terminal, you need to reactivate it.

Repository: github.com/tamagusko/lisbon-accidents-dashboard
Note: The data used in this workshop is for educational purposes only.