Stage 0 – Student Setup Instructions

Objective: Prepare your computer with Python, Miniconda, Git, and the Bootcamp repository so you are ready for class.

Note: You will also install Visual Studio Code (VS Code) for editing code and running notebooks.

Part 1 – Install Miniconda

1. **Download Miniconda**
    - Go to: https://docs.conda.io/en/latest/miniconda.html
    - Choose the installer for your operating system:
        - **Windows:** Miniconda3 Windows 64-bit installer (.exe)
        - **Mac:** Miniconda3 macOS Intel or ARM (M1/M2) installer (.pkg or .sh)
        - **Linux:** Miniconda3 Linux 64-bit installer (.sh)
2. **Run the Installer**
    - **Windows:** Double-click the `.exe` file, choose "Just Me", accept defaults, and let it add Miniconda to your PATH.
    - **Mac/Linux:** Open a terminal and run:

      ```
      bash Miniconda3-latest-<your-os>.sh
      ```

      Follow the prompts (press `Enter` to accept defaults).
3. **Verify Installation**
    - Close and reopen your terminal or Anaconda Prompt.
    - Run:

      ```
      conda --version
      ```

      You should see something like `conda 24.x.x`.

Part 2 – Create Your Virtual Environment

1. **Create environment named `bootcamp_env`**

   ```
   conda create -n bootcamp_env python=3.10
   ```

2. **Activate the environment**

```
conda activate bootcamp_env
```

3. **Install required packages**

```
pip install jupyterlab python-dotenv numpy
```

Part 3 – Test with JupyterLab

1. **Launch JupyterLab**

```
jupyter lab
```

This will open JupyterLab in your web browser.

2. **Create a new Python notebook**

   - Click **Python [conda env:bootcamp_env]** as the kernel.
   - In the first cell, type:

```
print("Hello, Bootcamp!")
```

   - Run the cell (Shift + Enter). You should see:

```
Hello, Bootcamp!
```

3. **Save the notebook**

   - Name it `python_tutorial`
   - It will save as `python_tutorial.ipynb`
   - Close JupyterLab in the browser.
   - Go to command window and press ctrl-c
   - if you are done with python, run `conda deactivate`

Part 4 – Install Git

1. **Check if Git is installed**

```
git --version
```

If you see a version number, skip to Part 5.

2. **Install Git**
   - **Windows:** Download from https://git-scm.com/download/win and install with defaults.
   - **Mac:**

     ```
     brew install git
     ```

     (Requires Homebrew — install from https://brew.sh if missing)
   - **Linux:**

     ```
     sudo apt-get update && sudo apt-get install git
     ```

Part 5 – Configure Git

```
git config --global user.name "Your Name"
git config --global user.email "your.email@example.com"
```

Part 6 – Create Your Bootcamp Repository

1. **On GitHub**
   - If you do not already have one, sign up for a GitHub account.
   - Sign in to your GitHub account.
   - Click **New Repository**.
   - Name it:

     ```
     bootcamp_<firstname>_<lastname>
     ```

     Example: `bootcamp_jane_doe`
   - Keep it **public** (unless instructed otherwise).
   - Check **Add a README file**.

- Click **Create repository**.

2. **Clone the repository locally**

```
git clone https://github.com/<your-
username>/bootcamp_<firstname>_<lastname>.git
cd bootcamp_<firstname>_<lastname>
```

Part 7 – Set Up Folder Structure

```
mkdir homework
mkdir project
mkdir class_materials
mkdir homework
cd homework
mkdir homework/homework0
```

Part 8 – Create `.gitignore`

Create a `.gitignore` file in the root of your repo:

```
# Ignore local class materials
class_materials/

# Ignore Python cache files
__pycache__/
*.pyc

# Ignore environment files
.env
```

Part 9 – Update README.md

Open `README.md` and replace with:

```
# Bootcamp Repository

## Folder Structure
- **homework/** → All homework contributions will be submitted here.
- **project/** → All project contributions will be submitted here.
- **class_materials/** → Local storage for class materials. Never pushed to
GitHub.
```

```
## Homework Folder Rules
- Each homework will be in its own subfolder (`homework0`, `homework1`, etc.)
- Include all required files for grading.

## Project Folder Rules
- Keep project files organized and clearly named.
```

Part 10 – Add the Notebook

Move the Python tutorial notebook into `homework/homework0/`:

```
mv /path/to/python_tutorial.ipynb homework/homework0/
```

Part 11 – Commit and Push

```
git add .
git commit -m "Initial repo setup with homework0 notebook"
git push origin main
```

Part 12 – Install Visual Studio Code (VS Code)

VS Code will make editing Python files.

1. **Download VS Code**
    - Go to: https://code.visualstudio.com/Download
    - Choose the installer for your OS and download it.
2. **Install VS Code**
    - Run the installer and accept defaults.
    - On Windows, check **Add to PATH** and **Add "Open with Code" to context menu** during setup.
    - On Mac, drag the app into your **Applications** folder.

✅ You are now ready for class!