

Linux Python Dev Environment Setup (Post-Install)

1. System Update

- `sudo apt update && sudo apt upgrade -y`

2. Python Essentials

- `sudo apt install python3 python3-pip python3-venv`
- Add aliases in `~/.bashrc` or `~/.zshrc`:

`alias python=python3`

`alias pip=pip3`

3. Dev Tools

- `sudo apt install git curl wget build-essential`
- `git config --global user.name "Kelvin Macharia"`
- `git config --global user.email "you@example.com"`

4. VS Code on Linux

- Install via: `sudo snap install code --classic`
- Extensions: Python, Pylance, Jupyter, GitLens, Black, Docker

5. Virtual Environments

- `python -m venv venv`
- `source venv/bin/activate`
- `pip install --upgrade pip`
- `pip install black isort pylint mypy pytest`

`.vscode/settings.json`:

```
{  
  
  "python.formatting.provider": "black",  
  
  "editor.formatOnSave": true,  
  
  "python.linting.pylintEnabled": true,  
  
  "python.linting.enabled": true,  
  
  "python.analysis.typeCheckingMode": "basic"
```

```
}
```

6. Optional Tools

- Docker: `sudo apt install docker.io && sudo usermod -aG docker $USER`
- Poetry: `curl -sSL https://install.python-poetry.org | python3 -`
- Zsh: `sudo apt install zsh && install Oh My Zsh`

7. Workflow Commands

- Create venv: `python -m venv venv`
- Activate venv: `source venv/bin/activate`
- Format: `black .`
- Lint: `pylint file.py`
- Type check: `mypy file.py`
- Test: `pytest`
- Git: `git add . && git commit -m "msg" && git push`

8. Project Structure

```
myproject/  
--- venv/  
--- .vscode/  
--- app/  
--- tests/  
--- requirements.txt  
--- pyproject.toml  
--- README.md
```