

Environment Setup Guide



Anaconda

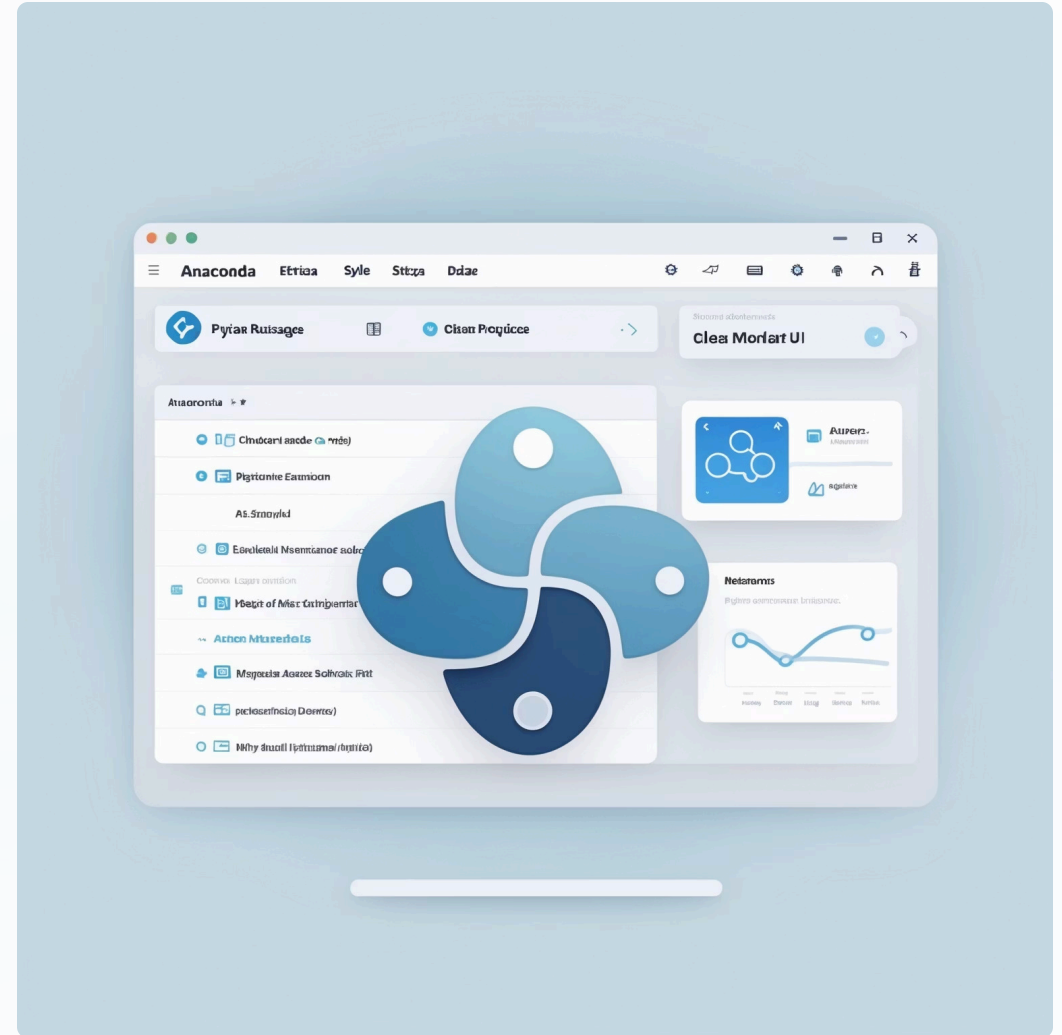
Why? To manage Python environments and dependencies for ML workflows.

Installation Links:

- Windows:
<https://www.anaconda.com/products/distribution#Downloads>
- macOS:
<https://www.anaconda.com/products/distribution#Downloads>
(Choose Intel or Apple Silicon version based on your chip)
- Linux:
<https://www.anaconda.com/products/distribution#Downloads>

Verify Installation:

```
conda --version
```



UV (Ultra-fast Python package manager)

Why? A modern alternative to pip, poetry, and pipx. It installs packages lightning fast.

Install on All OS (using shell):

```
curl -Ls https://astral.sh/uv/install.sh | sh
```

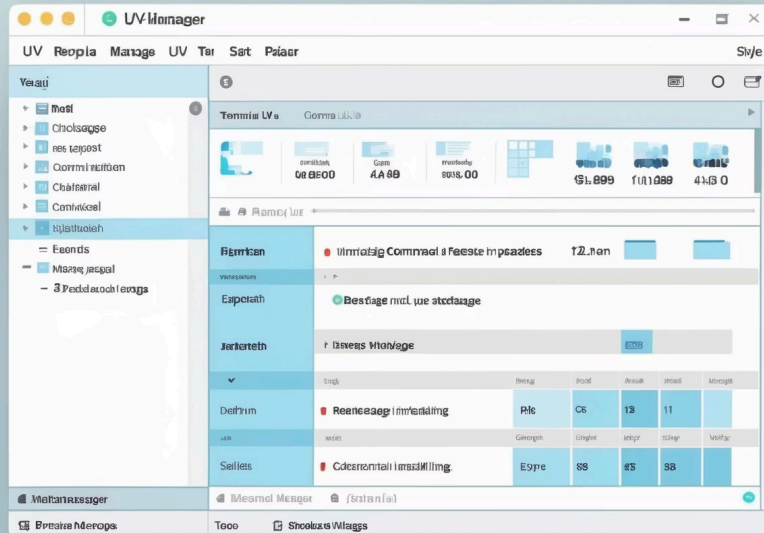
Windows Alternative (PowerShell or Git Bash): Use Scoop:

```
scoop install uv
```

Verify Installation:

```
uv --version
```

Official Repo: <https://github.com/astral-sh/uv>



Git



Why Use Git?

Version control and project collaboration via GitHub or GitLab.



Installation Links

- Windows: <https://git-scm.com/download/win>
- macOS: If you have Homebrew: brew install git
- Or use: <https://git-scm.com/download/mac>
- Linux (Ubuntu/Debian): sudo apt install git



Verify Installation

```
git --version
```

VS Code or Cursor IDE

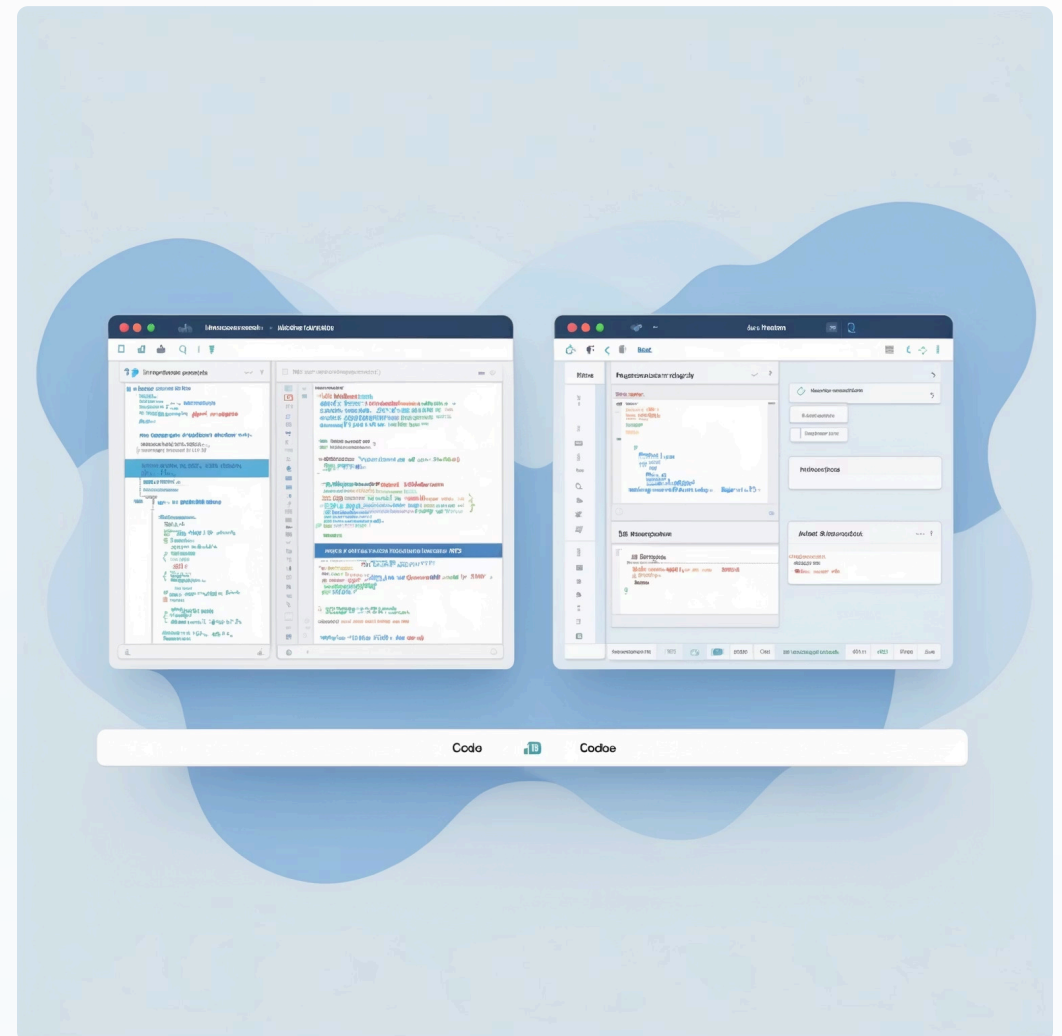
Why? Modern code editors for developing, debugging, and interacting with Jupyter notebooks or Python scripts.

VS Code:

- All OS: <https://code.visualstudio.com/Download>

Cursor (AI-native IDE — optional but recommended):

- All OS: <https://www.cursor.sh/>



Recommended Extensions (VS Code):

- Python
- Jupyter
- GitLens
- Pylance

Python (Optional – already bundled with Anaconda)



Why Install Separately?

Install separately only if not using Anaconda or for advanced setups using uv.



Installation

<https://www.python.org/downloads/>



Recommended Version

Python 3.10 or 3.11 (avoid beta/alpha versions)

Optional Tools

Tool	Purpose	Link
Docker	For containerized deployment	https://www.docker.com/products/docker-desktop
Postman	API testing	https://www.postman.com/downloads/
DBeaver / TablePlus	SQL client	https://dbeaver.io / https://tableplus.com

Pre-Class Checklist

- 1 Anaconda Installed
 - 2 UV Installed
 - 3 Git Installed
 - 4 VS Code or Cursor Installed
 - 5 Python 3.10+ Working
 - 6 Docker (optional) Installed
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