

Python Development Environment & Fundamentals

Clear Workflow (very important)

- ① Create Project Directory
- ② Initialize the Git Repository
- ③ Open IDE
- ④ Configure python interpreter
- ⑤ Create venv
- ⑥ Install dependencies
- ⑦ Write code
- ⑧ Test
- ⑨ Commit Change
- ⑩ Push to git

uv - method -

```
uv venv # create virtual environment
venv\Scripts\activate # activate the venv
uv pip sync requirements.txt # install the dependencies
uv pip install (package) # install new package
uv pip list # list the packages
```

commit - git

```
git add requirement.txt
git commit -m "Add request library for API call"
git push.
```

Errors -

- ① `uv venv` → 'uv' is not recognised as an internal or external command, operable program or batch

uv is not installed in my system. That is the reason I got this error (source: stackoverflow and chatgpt)

Solution: in the powershell

```
powershell -c "irm https://astral.sh/uv/install.ps1 | iex"
```

Get an

- ② failed to build 'matplotlib == 3.7.2'

- The build backend returned an error
- call to 'setuptools.build_meta.build_wheel' failed (Certificate: 1)

my system has python (3.13.2) version, which doesn't match with the versions of the packages

`pandas == 2.3.2`
`requests == 2.31.0`
`matplotlib == 3.7.2`

} these 3 version work with python 3.10 & 3.11
Not on 3.13.

Solution: Need to downgrade python.