

Student Homework Sheet — Stage 02: Tooling Setup

Assignment Summary

You will set up a reproducible Python project scaffold, configure secrets via `.env`, verify Jupyter, and push an initial GitHub repository.

In the lecture, we learned to create isolated environments, manage secrets with `.env`, scaffold projects, and use Git. **Now, you will adapt those steps to set up your own repo end-to-end.**

Tasks (Step-by-Step)

1. Create environment

- Use `conda create -n fe-course python=3.11 -y` or `python -m venv env`
- Activate it and `pip install python-dotenv numpy jupyter`

2. Project scaffold

- Create folders: `data/`, `notebooks/`, `src/`
- Add a `README.md` with a one-paragraph project purpose

3. Secrets

- Copy `.env.example` → `.env`
- Fill in: `API_KEY=dummy_key_123` and `DATA_DIR=./data`

4. Config helper

- Create `src/config.py` with `load_env()` and `get_key()` as in lecture

5. Jupyter check

- Create `notebooks/00_project_setup.ipynb`:
 - Markdown title, "Environment & Config Check"
 - Code: `load_dotenv()`; print if `API_KEY` exists; import `numpy` and run a small array op

6. Freeze dependencies

- Run `pip freeze > requirements.txt`

7. Git + GitHub

- Initialize Git, commit, create remote, push
- Ensure `.env` is excluded by `.gitignore`

8. Submission

- Post your GitHub repo URL in Slack or LMS

Rubric (100 pts)

- Environment created & packages installed (15)
- Project structure present (15)
- `.env` configured and read via code (20)
- `requirements.txt` exists & is non-empty (10)
- Jupyter notebook runs with NumPy demo (20)
- Git history with initial commits & remote (15)
- README present & clear (5)

Example Submission Expectations

- Repo with folders as above
- `src/config.py` working
- `notebooks/00_project_setup.ipynb` showing "API_KEY present: True"
- `.gitignore` includes `.env` and possibly `/data/`
- Clean commit messages (see suggested milestones)

Academic Integrity & Hygiene

- Do not commit real secrets; use dummy keys.
- Keep notebooks executable top-to-bottom.