

TP-2: Clean Coding & Modular

Exercise 1: Apply PEP8 and Docstrings

Objective

Practice clean code formatting and documentation using **PEP8** and **docstrings**.

Instruction

Refactor the messy code below to:

- Follow PEP8 (indentation, spacing, variable naming).
- Add docstrings to explain each function.

Exercise 2: Add Configuration and Constants

Objective

Use a **configuration module** to separate constant values (like file paths or thresholds) from main code.

Instruction

1. Create a new file named `config.py`.
2. Move constant values (like CSV path or threshold age) to that file.
3. Import and use them in your functions.

Exercise 3: Add Logging and Exception Handling

Objective

Implement **logging** and **try/except** blocks instead of print statements.

Instruction

1. Import and configure the `logging` module.
2. Replace `print()` with appropriate logging levels.
3. Handle `FileNotFoundException` using a `try/except` block.

Exercise 4: Modularize the Project

Objective

Split code into multiple [modules](#) inside a package for clean structure.

Instruction

1. Create the following structure:
2. preprocessing_package/
3. |__ __init__.py
4. |__ data_loader.py
5. |__ data_cleaner.py
6. |__ config.py
7. Move each function into its proper file.
8. Import and use them in main.py.

Exercise 5: Package Setup & Code Quality Check

Objective

Convert module into a Python package and check code style with [flake8](#) or [black](#).

Instruction

1. Create a `setup.py` file:
2.

```
from setuptools import setup, find_packages
```
3.

```
3.
```
4.

```
4. setup(
```
5.

```
5.     name="preprocessing_package",
```
6.

```
6.     version="0.1",
```
7.

```
7.     packages=find_packages(),
```
8.

```
8.     install_requires=["pandas"],
```
9.

```
9.     description="Simple preprocessing package for data science",
```
10.

```
10.    author="Your Name",
```
11.

```
11. )
```
12. Install locally:
13.

```
13. pip install -e .
```
14. Run:
15.

```
15. black .      # to auto-format
```
16.

```
16. flake8 .     # to check for style errors
```
17. Submit your formatted and working project.