

Linting, formatting, automatizing

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Overview

Linting and formatting in Python

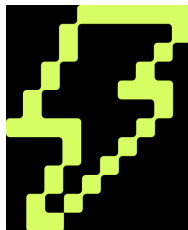
Configuring Ruff

Automatizing with pre-commit

Beyond Python

Linting and formatting in Python

- many tools: Pyflakes, Black, Flake8, plugins. . .
- **Ruff**: one tool to rule them all
- linting with ~ 800 rules + formatting
- extremely fast (Rust)



```
$ ruff -h  
$ ruff check my_module.py  
$ ruff format my_module.py
```

<https://docs.astral.sh/ruff>

Configuring Ruff

- Add configuration in file `pyproject.toml`
- see <https://docs.astral.sh/ruff/configuration>

```
[tool.ruff]
```

```
line-length = 88
```

```
indent-width = 4
```

```
[tool.ruff.lint]
```

```
select = ["E", "F", "RET"]
```

```
ignore = ["RET504"]
```

```
[tool.ruff.format]
```

```
# differ from Black
```

```
quote-style = "single"
```

Automatizing with pre-commit

- *hooks* are scripts to be executed when committing
- **pre-commit** is a framework for managing them
- hooks are automatically run on staged files
- Commit is refused if any hook fails
- to integrate Ruff, follow <https://docs.astral.sh/ruff/integrations/#pre-commit>



```
$ # write .pre-commit-config.yaml
$ pre-commit install
$ git add .pre-commit-config.yaml
$ git add my_module.py
$ git commit # automatically calls pre-commit run
```

<https://pre-commit.com>

Continuous integration with pre-commit

- continuous integration on GitHub
- automatically run on pull requests
- modify other people code!



<https://pre-commit.ci>

 **lgarrison** and others added 3 commits last month

-   zcv: use asdf lazy_load=False and N_modes -> N_mode
-   asdf: use asdf._compression to support asdf 3.1.0
-   [pre-commit.ci] auto fixes from pre-commit.com hooks 

for more information, see <https://pre-commit.ci>

✗ b66eafe

✗ a176bed

✓ e05ce56

Beyond Python

Language agnostic hooks

- check-merge-conflict
- trailing-whitespace
- check-toml
- many other at <https://github.com/pre-commit/pre-commit-hooks>

Rust <https://github.com/FeryET/pre-commit-rust>

- formatting with rustfmt

Julia <https://github.com/qiaojunfeng/pre-commit-julia-format>

- formatting with JuliaFormatter.jl

Conclusion

- Linting and formatting
 - tool: Ruff <https://docs.astral.sh/ruff>
 - configure in pyproject.toml
- Automate linting and formatting
 - tool: pre-commit <https://pre-commit.com>
 - continuous integration <https://pre-commit.ci>
- Other languages
 - Rust <https://github.com/FeryET/pre-commit-rust>
 - Julia <https://github.com/qiaojunfeng/pre-commit-julia-format>

Thank you for your attention!