#### **Effective Programming Practices for Economists**

# Software engineering

Style guides

Janoś Gabler and Hans-Martin von Gaudecker

#### Main message

- Style guides are important
- Style guides do not automatically make code good
- Style guides should be automated!

### **Naming conventions**

- Functions and methods are lowercase\_with\_underscores
- Local variables are lowercase\_with\_underscores
- Global <del>variables</del> constants are <u>uppercase\_with\_underscores</u>
- Classes are CamelCase, instances are lowercase\_with\_underscores
- Private functions start with \_underscores

# Why naming conventions are important

- Help to communicate information without extra characters
- Make it easier to read code written by others
- Reduce your mental load when deciding about variable names
- Do not cost any time to implement

# **Examples of formatting rules**

- Loop and function bodys are indented by four spaces (mandatory)
- Maximum line length of 88 characters
- Two blank lines between function definitions, one between method definitions
- Whitespaces around operators
- **-** ...

# Why formatting is important

- Many formatting rules are based on rigorous research about code readability
- Indentation helps to prevent bugs!
- Familiar formatting makes it easier to read code written by others

## Why style guides should be automated

- Code style is important, so it has to be enforced
- Formatting is boring, so it should be automated
- Could never manage to be consistent enough to not get any fake changes in version control
- Manual formatting and discussions about it distract from important things

# How to automate style guides?

- Linters in your editor
- Formatters in your editor
- Pre-commit hooks