UNIVERSITY of WASHINGTON

Software Design for Data Science

Advanced Packages

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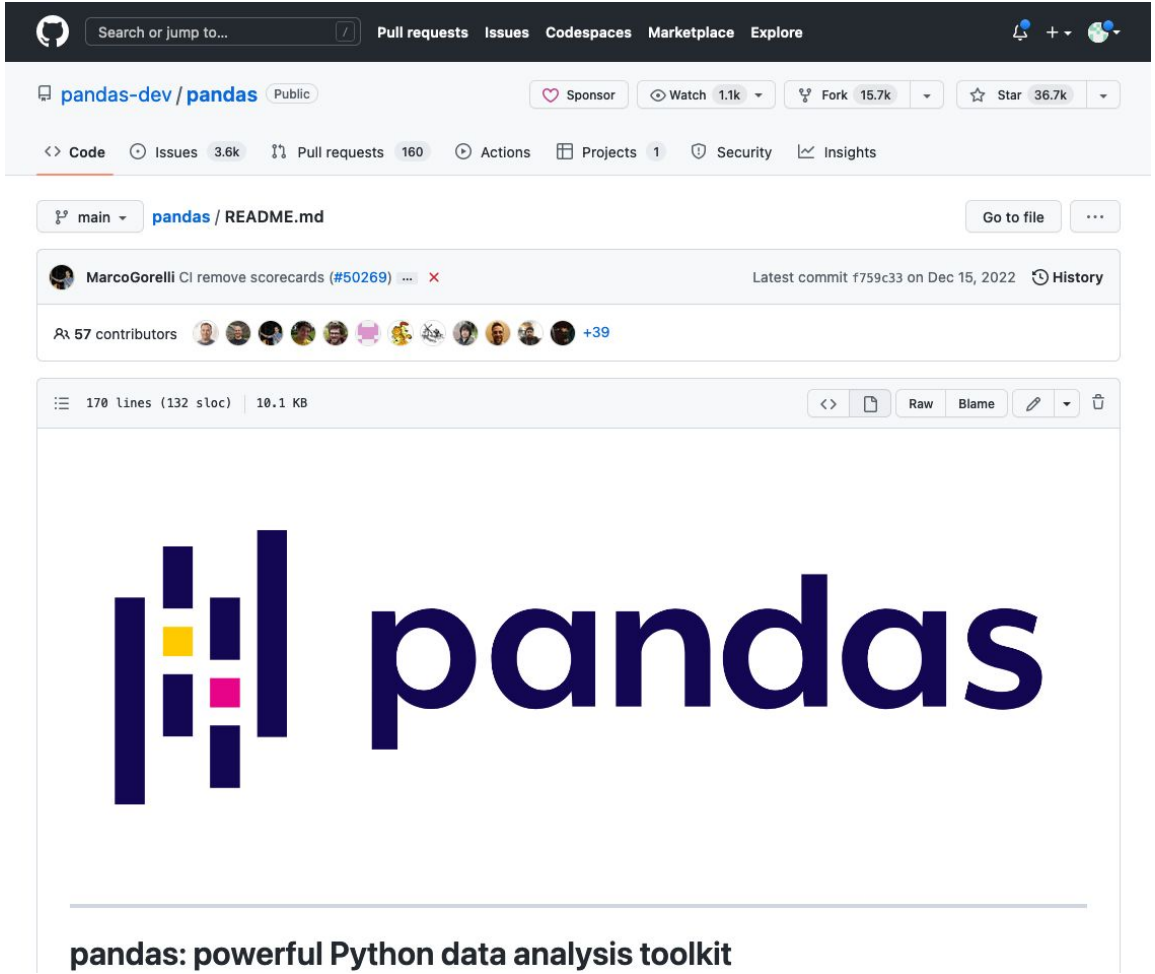
February 29, 2024

Distributing a Python package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pandas-dev / pandas
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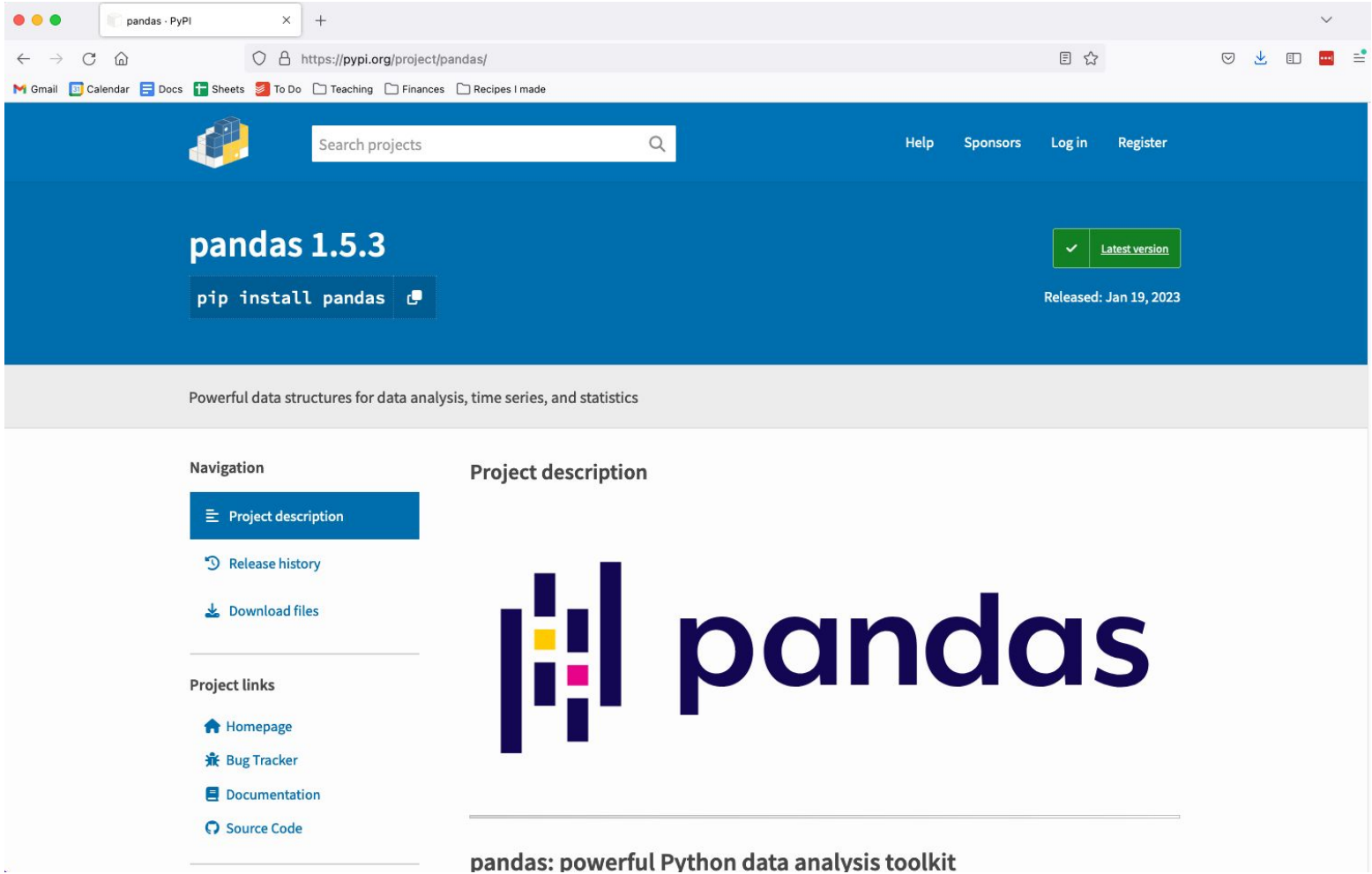
Code
Issues 3.6k
Pull requests 160
Actions
Projects 1
Security
Insights
main
pandas / README.md
Go to file
MarcoGorelli CI remove scorecards (#50269)
Latest commit f759c33 on Dec 15, 2022
History
57 contributors
+39
170 lines (132 sloc)
10.1 KB
Raw
Blame
pandas
pandas: powerful Python data analysis toolkit

PyPI


pandas · PyPI
https://pypi.org/project/pandas/
Gmail
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pandas 1.5.3
pip install pandas
Latest version
Released: Jan 19, 2023
Powerful data structures for data analysis, time series, and statistics
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pandas
pandas: powerful Python data analysis toolkit

Extending project structure for PyPI

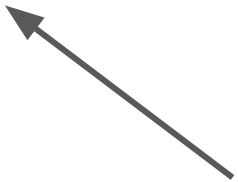
```
myproject/
    README.md
    LICENSE
    myproject/
        __init__.py
        pyproject.toml
        core.py
        subpackage/
        submodule/
        tests/
```

Contains metadata for the package for PyPI. This metadata is then piped to a package builder - often `setuptools` but there are others like `hatchling`

https://packaging.python.org/en/latest/tutorials/packaging-projects/

Extending project structure for PyPI

```
myproject/
    README.md
    LICENSE
    myproject/
        __init__.py
        setup.py
        requirements.txt
        core.py
        subpackage/
        submodule/
        tests/
```



Contains absolute dependencies, especially useful if you're publishing an application.
Can be generated using:

```
conda list --export > requirements.txt
```

OR

```
pip freeze > requirements.txt
```

Extending project structure for PyPI

```
myproject/
    README.md
    LICENSE
    myproject/
        __init__.py
        setup.py
        requirements.txt
        MANIFEST.in
        core.py
        subpackage/
        submodule/
        tests/
```

Specify data and files that should also be packaged in addition to the Python modules

Example `pyproject.toml`

https://github.com/UWDATA515/ci_example/blob/main/pyproject.toml

More examples

Check out existing Python packages. These may be more complicated:

https://github.com/numpy/numpy

https://github.com/pandas-dev/pandas

Submitting your package to PyPI

Update your code and version number. Run your test suites and ensure your code works as intended. Create a PyPI account if you don't have one already

Create your source, and if desired, binary distribution:

```
$ python setup.py bdist egg upload [options]
$ python setup.py bdist wininst [options]
$ python setup.py sdist [options]
```

Install `twine` package to submit builds to PyPI.

(Can install using conda install twine, pip install twine, etc.)

```
$ twine upload dist/*
```

Exercise: Set up your project's `pyproject.toml` file

https://setuptools.pypa.io/en/latest/userguide/index.html