

Overview of GPy

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What is GPy?

<https://github.com/SheffieldML/GPy>

GPy

The Gaussian processes framework in Python.

- GPy [homepage](#)
- Tutorial [notebooks](#)
- User [mailing-list](#)
- Developer [documentation](#) [documentation \(devel branch\)](#)
- Travis-CI [unit-tests](#)
- [licence](#) [BSD](#) [Depsy](#) [97th percentile](#)

Status

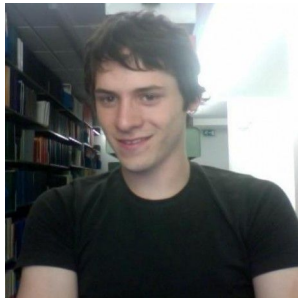
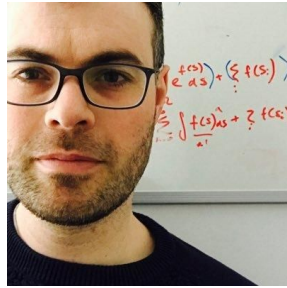
Branch	travis-ci.org	ci.appveyor.com	coveralls.io	codecov.io
Default branch (<code>devel</code>)	 build passing	 build passing	 coverage 57%	 codecov 55%
Deployment branch (<code>deploy</code>)	 build passing	 build passing	 coverage 57%	 codecov 54%

What's new:

From now on we keep track of changes in the CHANGELOG.md. If you want your changes to show up there follow the [guidelines](#). In particular tag your commits by the [gitchangelog](#) commit message format.

Starting point

Research Group of Neil Lawrence at Sheffield University

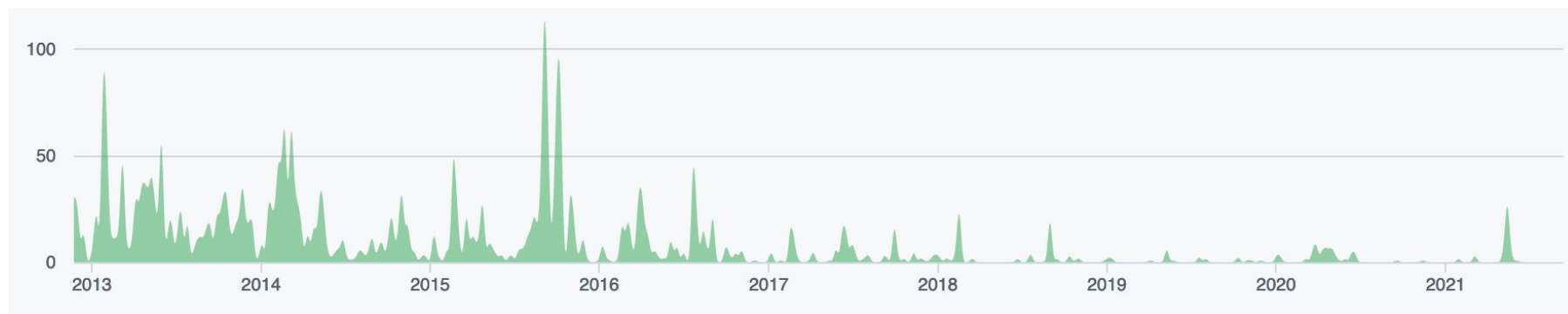


The University Of Sheffield.



[The full list of contributors](#)

GPy is stable but no longer under intense development.



Useful GPy Resources

- Many GPy examples can be found:

<https://github.com/SheffieldML/notebook/tree/master/GPy>

- Index:

<https://github.com/SheffieldML/notebook/blob/master/GPy/index.ipynb>

- Let's go through a basic one:

<https://github.com/SheffieldML/notebook/blob/master/GPy/GPyCrashCourse.ipynb>

- Model Basics:

https://github.com/SheffieldML/notebook/blob/master/GPy/models_basic.ipynb

Useful GPy Resources

- Kernel Basics:

https://github.com/SheffieldML/notebook/blob/master/GPy/basic_kernels.ipynb

- Sparse GP:

https://github.com/SheffieldML/notebook/blob/master/GPy/sparse_gp_regression.ipynb

GPpy Package Design

- Kernels:

<https://github.com/SheffieldML/GPy/tree/devel/GPy/kern/src>

- Models:

<https://github.com/SheffieldML/GPy/tree/devel/GPy/models>

- Inference methods:

<https://github.com/SheffieldML/GPy/tree/devel/GPy/inference>

- Likelihoods:

<https://github.com/SheffieldML/GPy/tree/devel/GPy/likelihoods>

- Core GP implementation:

<https://github.com/SheffieldML/GPy/tree/devel/GPy/core>

Pros and Cons

Pros:

- A Convenient GP library to start with
- Quick kernel construction with sum and product
- Many common models, inference and likelihood readily available
- Numerical stability is carefully considered for many models.

Cons:

- In maintenance mode
- No auto-differentiation
- No GPU acceleration