Python in Astronomy 2018

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Some Aha Moments

open source ≠ open development

github makes it easy to get involved in open dev

New Packages, Updates

NOAO Data Lab	catalogs and python-based tools
ndcube	handle n dimensional data described by wcs
PLAsTiCC	simulate LSST data
Dataproc	package to handle large amounts of (observational) data
astroplan	package for planning ground-based observations
LIGO	open data workshop
sunpy	tries to replace SSW (IDL)
CHIANTI	atomical database
poliastro	astrodynamics
specutils	analysis of spectra
specvis	on top of specutils, visualization
Stingray	open source (X-ray) spectral-timing software
vip_hci	uses machine learning to search for exoplanets
synphot	Synthetic photometry
corrfunc	Highly optimized correlation function code
shwirl	real-time visualization of spectral data cubes.
celerite	fast and scalable Gaussian Process (GP) Regression
astropy template	quickly create new Python packages within the Astropy ecosystem

Get Credit for your Code

Putting material on github is publishing!

Get Credit for your Code

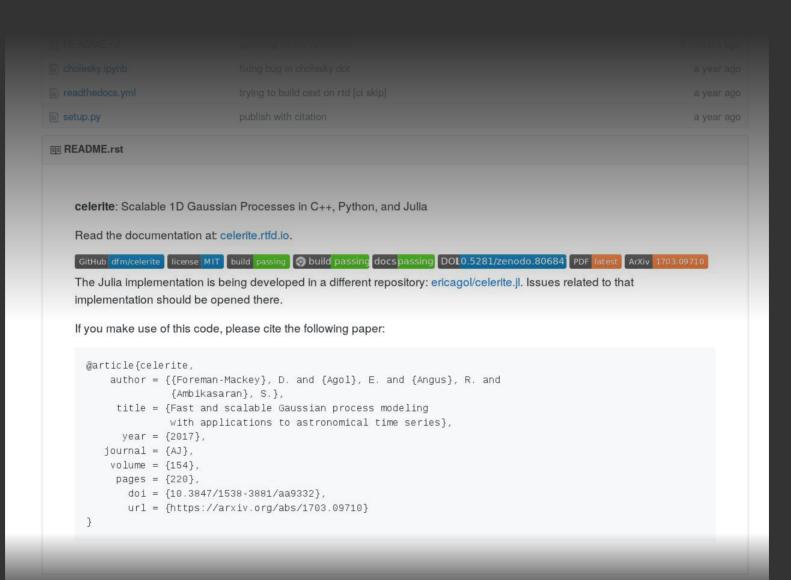peer-reviewed paper (Astronomy and Computation, Journal of Open Source Software , AAS)

Astrophysics Source Code Library (ADS indexed, citable)

zenodo (DOI, citable)

github (don't forget the license)

Scope / scientific impact

Make it easy to be cited!

📖 **README.rst**

celerite: Scalable 1D Gaussian Processes in C++, Python, and Julia

Read the documentation at: celerite.rtfd.io.

`GitHub dfm/celerite` `license MIT` `build passing` `build passing` `docs passing` `DOI 10.5281/zenodo.80684` `PDF latest` `ArXiv 1703.09710`

The Julia implementation is being developed in a different repository: ericagol/celerite.jl. Issues related to that implementation should be opened there.

If you make use of this code, please cite the following paper:

```
@article{celerite,
    author = {{Foreman-Mackey}, D. and {Agol}, E. and {Angus}, R. and
              {Ambikasaran}, S.},
     title = {Fast and scalable Gaussian process modeling
              with applications to astronomical time series},
      year = {2017},
   journal = {AJ},
    volume = {154},
     pages = {220},
       doi = {10.3847/1538-3881/aa9332},
       url = {https://arxiv.org/abs/1703.09710}
}
```

Ask me about new packages

Increase the visibility of your software

Make it easy to cite it

don't forget the license

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