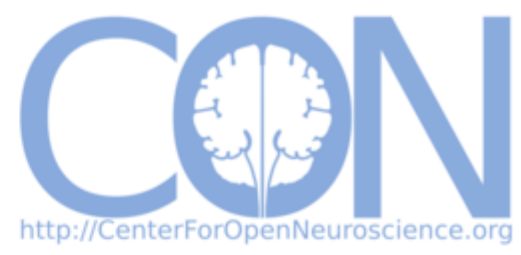



<http://NeuroDebian.net>


# Science: give DueCredit to software and methods developers!

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**Do you acknowledge the people who created your favorite toolbox?**

Often users are not aware of all the methods they're using in their analysis, and thus can't properly acknowledge the software and method developers

**Can you imagine your research without Open Source Software?**

Without adequate citations for softwares and methods, funding agencies receive the false impression that scientific software is not important enough to be funded

**Have you ever created a new project just to get your work cited?**

Many times people (e.g., Ph.D. students) "re-implement the wheel" creating short-lived independent projects instead of contributing to existing ones, just because they need to get citations for their methods/software

## Solution: a simple framework in Python to embed references in the code

**User**



```
# A tiny analysis script to demonstrate duecredit
from scipy.cluster.hierarchy import linkage
from scipy.spatial.distance import pdist
from sklearn.datasets import make_blobs

print("I: Simulating 4 blobs")
data, true_label = make_blobs(centers=4)

dist = pdist(data, metric='euclidean')

Z = linkage(dist, method='single')
print("I: Done clustering 4 blobs")
```



<http://duecredit.org>

1. copy [duecredit/stub.py](#) to your codebase as `due.py`
2. import necessary pieces  
`from .due import due, Doi`
3. cite modules or functions using a doi or a BibTeX entry

```
# module
due.cite(Doi("1.2.3/x.y.z"),
        description="Solves all your problems",
        path="magicpy")

# functions
@due.dcite(Doi("1.2.3/x.y.z"), description="Finds love")
def find_love():
    ...
```

**Devel**



"Injected" and supported packages include  
scipy, scikit-learn, numpy,  
mdp, dipy, nipy, pymvpa, ...

**Run it!**

```
$> python -m duecredit examples/example_scipy.py
I: Simulating 4 blobs
I: Done clustering 4 blobs
```

DueCredit Report:

- Scientific tools library / numpy (v 1.10.4) [1]
- Scientific tools library / scipy (v 0.14) [2]
- Single linkage hierarchical clustering / scipy.cluster.hierarchy:linkage (v 0.14) [3]

2 packages cited  
0 modules cited  
1 function cited

References

- 
- [1] Van Der Walt, S., Colbert, S.C. & Varoquaux, G., 2011. The NumPy array: a structure for efficient numerical computation. *Computing in Science & Engineering*, 13(2), pp.22-30.
  - [2] Jones, E. et al., 2001. SciPy: Open source scientific tools for Python.
  - [3] Sibson, R., 1973. SLINK: an optimally efficient algorithm for the single-link cluster method. *The Computer Journal*, 16(1), pp.30-34.

**BibTeX?**

```
$> duecredit summary --format=bibtex
```

```
@article{van2011numpy,
  title={The NumPy array: a structure for efficient numerical computation},
  author={Van Der Walt, Stefan and Colbert, S Chris and Varoquaux, Gael},
  journal={Computing in Science & Engineering},
  volume={13},
  number={2},
  pages={22-30},
  year={2011},
  publisher={AIP Publishing}
}

@Misc{JOP+01,
  author={Eric Jones and Travis Oliphant and Pearu Peterson and others},
  title={SciPy: Open source scientific tools for {Python}},
  year={2001--},
  url="http://www.scipy.org/",
  note={Online; accessed 2015-07-13}}
}

@article{sibson1973slink,
  title={SLINK: an optimally efficient algorithm for the single-link cluster method},
  author={Sibson, Robin},
  journal={The Computer Journal},
  volume={16},
  number={1},
  pages={30-34},
  year={1973},
  publisher={Br Computer Soc}
}
```

## What next?

Extend support to other languages (R, MATLAB)

Integration with DataLad for citation of datasets  
[www.datalad.org](http://www.datalad.org)

Spread the word and increase adoption!

Centralized system for usage stats of packages and software

Use it and/or contribute at  
[github.com/duecredit](https://github.com/duecredit)



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