

Contributing to Sage: Who, What and How

William Stein



August 2010

Outline

Contributing to Sage

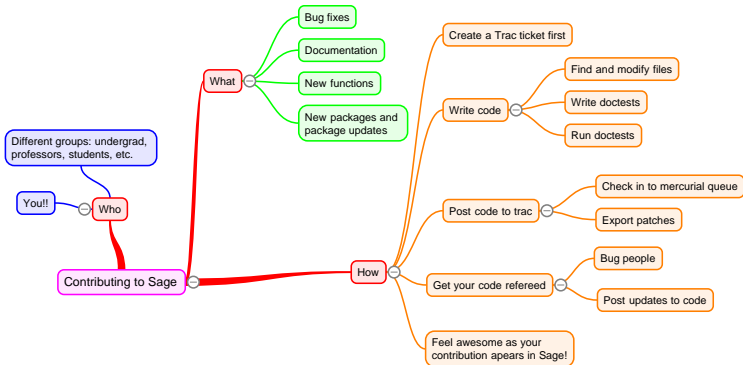
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Who
Contributes

What to
Contribute

How to
Contribute

Who, What and How



The Last Sage Release



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Who
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- “Sage 4.5.2 was released on August 7, 2010. The following *83 people* contributed to this release (of those, 15 made their *first contribution* to Sage):
- Release managers: Dan Drake, Mitesh Patel
- Statistics: We closed 159 tickets (coverage score: 83.8%)
- Tickets:

Closed tickets

```
#8489: Nicolas M. Thiéry: New ‘sageexample’ environment for sagemath
#8667: Simon King: New version of modular group cohomology spkg
... 156 other tickets ...
#9665: Rishikesh: Make lcalc accessible as a library on OS X
```

See http://trac.sagemath.org/sage_trac/milestone/sage-4.5.2

Who?

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1. Who contributes to Sage?

Who Contributes to Sage?



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- The 1241 sage-devel subscribers share their ideas:
<http://groups.google.com/group/sage-devel>
- Over 400 trac users:
http://trac.sagemath.org/sage_trac/
- <http://sagemath.org/development-map.html> map of nearly 200 developers who contribute code to Sage.



Who Contributes? You!



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Who
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- **High school students:** graphics, algebra/calculus, notebook
- **Undergraduates:** graphics, notebook, calculus, linear algebra, graph theory, and much, much more!
- **Graduate students:** advanced research-level mathematics – code algorithms of their thesis
- **Young mathematicians, postdocs:** often motivated by research-level math, and longterm projects like FLINT
- **Senior mathematicians:** major projects and libraries (PARI, GAP, NTL, etc.), documentation, books and articles
- **Scientists:** Numpy, Scipy, Matplotlib, numerics
- **Statisticians:** R, etc.
- **Software engineers:** Python, Cython, Twisted, etc.

What?

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Who
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2. What might you contribute?

What to contribute to Sage

Here are some ideas:

- 1 Browse or add to the (currently 2057) open tickets:
http://trac.sagemath.org/sage_trac/report/17
- 2 Referee a ticket needing review (currently 157):
http://trac.sagemath.org/sage_trac/report/30
- 3 Move an interact into the Sage library:
<http://wiki.sagemath.org/interact>
- 4 Translate the tutorial (currently French and English only):
<http://sagemath.org/help.html#SageStandardDoc>
- 5 Upgrade a package (many are out of date):
<http://sagemath.org/download-packages.html>
- 6 Help to port Sage to another operating system:
64-bit Solaris, MS Windows, iOS, Android, etc.
- 7 Create/translate a quick reference card:
<http://wiki.sagemath.org/quickref>
- 8 Sage “enhance” a book (examples, solutions to exercises)

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3. How?

All Contributions are Refereed



Experienced developers publically referee *all* contributions.

- 1 Get an account in seconds at http://trac.sagemath.org/sage_trac/
- 2 Create a new ticket for the feature you want to add, bug you want to fix, etc., by clicking [New Ticket](#).
- 3 Upload code and mark your ticket “Needs Review”.
- 4 Pester people until your ticket gets reviewed (or just wait).
- 5 Address all comments by the non-anonymous referees.
- 6 Take pride as your work appears in the next Sage release.

All the above steps can easily happen in less than a month!

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Live demo...