



The realities of open source testing: lessons learned from “Adopt pytest month”

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pytest

helps you write better programs

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Photo © Holger Krekel

A silhouette of a person with their arms raised against a colorful, bokeh-filled sky. The sky is filled with soft, out-of-focus light spots in shades of blue, green, and yellow. Several colorful balloons (yellow, red, blue, green, orange, purple) are floating in the air. Small black silhouettes of butterflies are scattered across the upper part of the image. The person's arms are raised, reaching towards the balloons and butterflies.

**WHY DOESN'T
EVERYONE USE
PYTEST?**

WHY DOESN'T *EVERYONE* USE PYTEST?

- Don't want extra dependencies
 - Prefer nose
 - Happy with unittest
-
- Don't know about it
 - Seems too complicated
 - Doesn't meet their needs



ADOPT PYTEST MONTH

- Pair experienced users with open source project maintainers to help them get started with pytest.
- For one month (April 2015).
- Promote pytest through its active adoption.



**April 2015 is
adopt pytest
month!**

Check out pytest.org/latest/adopt.html

26 PYTESTERS

Curious
about pytest?

April 2015 is
"adopt pytest month"!



8 PROJECTS

WHO TOOK PART?

- Bidict
Pytest helper(s): Tom Viner
 - Guessit
Sravan Bhamidipati
 - Kallithea
Marc Abramowitz, 2 others
 - Qutebrowser
Bruno Oliveira, Raphael Pierzina
 - Trump
Andreas, 2 others
 - Arkestra
Christian Long, Anatoly Bubenkov, 1 other
 - Nefertari
Arye, 1 other
 - Coursera-dl
Meejah
- Also (informally)
- Jsonpickle
 - Cookiecutter-django
 - Jinja2
 - Pelican



WHAT DID EVERYONE DO?

WHAT DID PYTESTERS DO?



- Used plain asserts
- Changed the test layout
- Removed boilerplate code
- Fixed minor bugs
- Used `@parametrize`
- Created fixtures
- Created custom markers
- Introduced pytest plugins

PYTESTERS



- Time spent:
8h, 8h, 15h, 18-24h, 40h
- Would you do APM again?

DEFINITELY

MAYBE

NO

- How do you feel about
pytest now, compared to
before?

MORE POSITIVE

THE SAME

WHAT DID MAINTAINERS DO?

- Discussed plans
- Refactored dir layout
- Wrote new tests
- Maintained communication
- Reviewed, merged PRs
- Updated pytest plugins
- Made a PyPI release for 1st time



MAINTAINERS

- Time spent:
4h, 8h, 10h, 50h, 80h (!)
- Would you recommend
APM to others?

YES

MAYBE

- How do you feel about
pytest now?
 - Know the basics, know
there is more to learn.



PYTEST++

“I will certainly continue using pytest and I am also recommending it to other projects where I participate.”

“I'll definitely continue using it! There are some last tests which need to be converted away from unittest, but I'll work on that today, and then the tests are 100% pytest :)”

“Will definitely continue using Pytest.”

IN GENERAL

“the experience itself was very rewarding”

“[The] Experience was fantastic”

“I wished that the APM lasted slightly longer than only a month!”

BUT...

- Some pytest helpers didn't show up
- Some pytest helpers didn't do much
- Some maintainers didn't do much
- Uneven contributions – bursts of activity / periods of silence and inactivity
- Matching projects & helpers with appropriate skills
- Unclear expectations of each other

LESSONS LEARNED:

LATENT COMMUNITY

“In the past I had submitted bug reports, helped with minor documentation, and open sourced some of my own (useless) projects. But this is the first time I contributed code to someone else's open source project. And I could do it only because you organized the whole thing – which project to contribute to, when, and how, are the most important decisions that I think most people can't figure out and you figured it out for me.”

CODE REVIEW IS IMPORTANT

“The gaps filled via, 'ask questions, get answers', are largely filled via google, forums, stack overflow, etc. The unfilled gap, is 'look at my code, tell me how to improve'”

“ I think that [my helper's] expertise in pytest (and python in general) has benefited a lot my little grassroots, one personshow project... We benefited a lot from having an experienced pair of eyes in our project.”

TWO-WAY MENTORING

“'managing' contributions do take a lot of time, especially for new contributors/areas”

“The project-volunteer matching process feels somewhat flawed. Our project, it's domain, is unlikely to excite the majority of volunteers. The process should allow some flexibility for that.”

A SPACE FOR ADVOCATES?

Could you offer a code review program to users of your library?

WHAT TO DO

- Sign up interested open source maintainers (new/existing)
- Sign up your experienced users (to specific projects)
- Prefer 1:1 pairings
- Encourage people to work in public, decide a comms schedule
- Encourage people to say “sorry, I haven't done that yet” and “I'm not sure where to start”
- Don't schedule in same month as major Python conference!

TO CONCLUDE...

- Adopt Pytest Month was a program to pair pytest helpers with open source maintainers for a month, to encourage new users. It mostly worked, some tweaks needed
- Recognising advocates broadened our community
- Targeted code review can be enjoyable, valuable
- Two-way mentoring is not a trivial effort
- This could be interesting for other projects to try

THANKS & CREDITS

- Thanks to Holger & pytest community for their support in holding APM
- Thanks to pytest helpers & project maintainers who took part
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SEE ALSO

- Thursday 11:45
 - Testing with two failure seeking missiles: fuzzing and property based testing, by Tom Viner
 - Come to the Dark Side! We have a whole bunch of Cookiecutters! by Raphael Pierzina

MORE

- More info at <http://pytest.org/latest/adopt.html> and full report at <https://github.com/pytest-dev/pytest/issues/676>
- Twitter: @pfctdayelise @pytestdotorg
- Web: <http://brianna.laughter.id.au>