

# [SciPy-Dev] Exact p-values in Mann-Whitney U test

Jamie Morton [jamietmorton@gmail.com](mailto:jamietmorton@gmail.com)

Thu Mar 5 09:17:35 CST 2015

- Previous message: [\[SciPy-Dev\] Exact p-values in Mann-Whitney U test](#)
- Next message: [\[SciPy-Dev\] Exact p-values in Mann-Whitney U test](#)
- Messages sorted by: [\[date\]](#) [\[thread\]](#) [\[subject\]](#) [\[author\]](#)

Hi Szymon Łęski,

I was planning on making a MC permutation test for the Mann-Whitney U test in the future.

I'm in the process of getting a permutation t-test

<<https://github.com/scipy/scipy/pull/4440>> and a permutation anova

<<https://github.com/scipy/scipy/pull/4519>> reviewed.

But perhaps having an exact p-value calculation for smaller sample sizes would be preferable.

If you submit a pull request, I'd be willing to take a look at it.

Jamie

On Thu, Mar 5, 2015 at 7:45 AM, Szymon Łęski <[s.leski@nencki.gov.pl](mailto:s.leski@nencki.gov.pl)> wrote:

> Hello,

>

> I wrote a Python implementation of exact p-values in Mann-Whitney U test.

> The current test (`scipy.stats.mannwhitneyu`) uses normal approximation, and

> is valid only for sample size > 20 (as stated in notes). The exact version

> is correct also for small samples.

>

> I believe this would be a useful thing to include in `scipy.stats`. However,

> the current version is still better for very large samples, so I think both

> versions should be kept. I wanted to ask for opinion on what would be the

> best way to include the new version.

> Separate function? Optional argument controlling which method is used?

> Heuristics based on sample sizes?

>

> I have put my script, and the paper I based the implementation on, in this

> Dropbox folder:

> <https://www.dropbox.com/sh/0zxp9u8sliwjl5/AAARecyrwQ2z-8xU-LbKOpwna?dl=0>

>

> Feedback appreciated!

>

> Best regards,

> Szymon Leski

>

> SciPy-Dev mailing list

> [SciPy-Dev@scipy.org](mailto:SciPy-Dev@scipy.org)

> <http://mail.scipy.org/mailman/listinfo/scipy-dev>

>

----- next part -----

An HTML attachment was scrubbed...

URL: <http://mail.scipy.org/pipermail/scipy-dev/attachments/20150305/9e371507/attachment.html>

- Previous message: [\[SciPy-Dev\] Exact p-values in Mann-Whitney U test](#)
- Next message: [\[SciPy-Dev\] Exact p-values in Mann-Whitney U test](#)
- Messages sorted by: [\[date\]](#) [\[thread\]](#) [\[subject\]](#) [\[author\]](#)

[More information about the SciPy-Dev mailing list](#)