QuPath's History: The Human Factor

A Story with Heroes and Villains

2024-05-21

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QuPath reference citation (2017)

Article | Open access | Published: 04 December 2017

QuPath: Open source software for digital pathology image analysis

Peter Bankhead, Maurice B. Loughrey, José A. Fernández, Yvonne Dombrowski, Darragh G. McArt, Philip D. Dunne, Stephen McQuaid, Ronan T. Gray, Liam J. Murray, Helen G. Coleman, Jacqueline A. James, Manuel Salto-Tellez ✉ & Peter W. Hamilton ✉

Scientific Reports **7**, Article number: 16878 (2017) | Cite this article

112k Accesses | **3306** Citations | **74** Altmetric | Metrics

https://doi.org/10.1038/s41598-017-17204-5

Not the QuPath reference citation (2021)

COMPUTATIONAL AND STRUCTURAL BIOTECHNOLOGY JOURNAL

ELSEVIER

journal homepage: www.elsevier

QuPath: The global imp... ...ogy system

M.P. Humphries [a], P. Maxwell [a], M...

a Precision Medicine Centre of Excellence, The Patrick G Johnsto... ...fast, UK
b Integrated Pathology Programme, Division of Molecular Patholo...

ARTICLE INFO

... & Cell Biology at Queen's University Belfast ...d by Invest Northern Ireland and Cancer ...re program in the world. On the back ...nalyse whole slides images (WSI), ...ue based image analysis; these ...uirement to visualise images ...r high-throughput repro- ...t continues to struggle ...ugmented with DP. ...nalysis DP system ...as been cited, as the ystem of choice for researchers.

Who wrote the original QuPath?
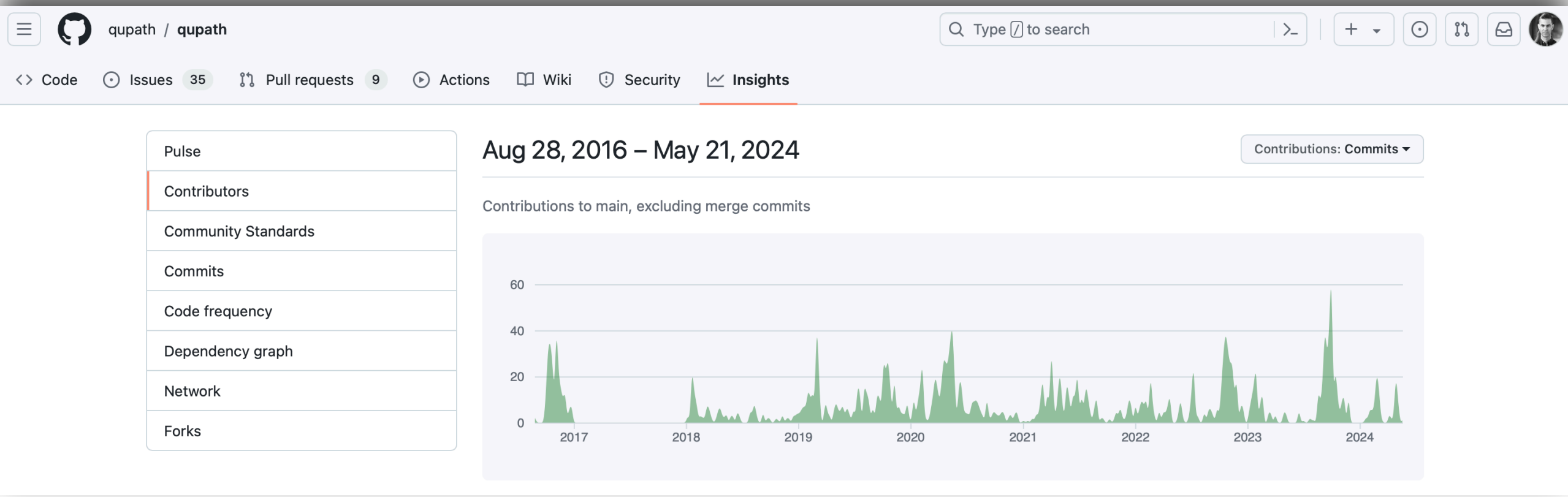
Peter Bankhead!

and just Peter Bankhead

later, members from his group contributed:

Melvin Gelbard, Léo Leplat, Alan O'Callaghan, Mahdi Lamb, Fiona Inglis, Laura Nicolás-Sáenz, …

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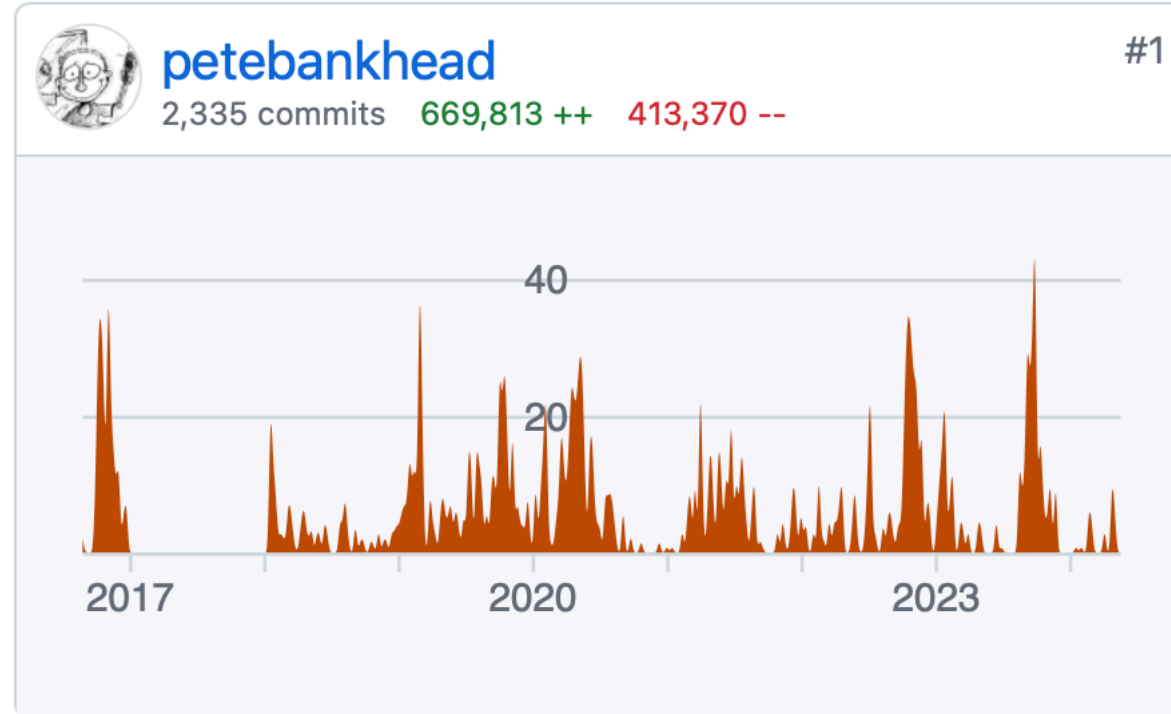Image Analysis Collaboratory

Pete's group in Edinburgh

QuPath contributions are public on GitHub

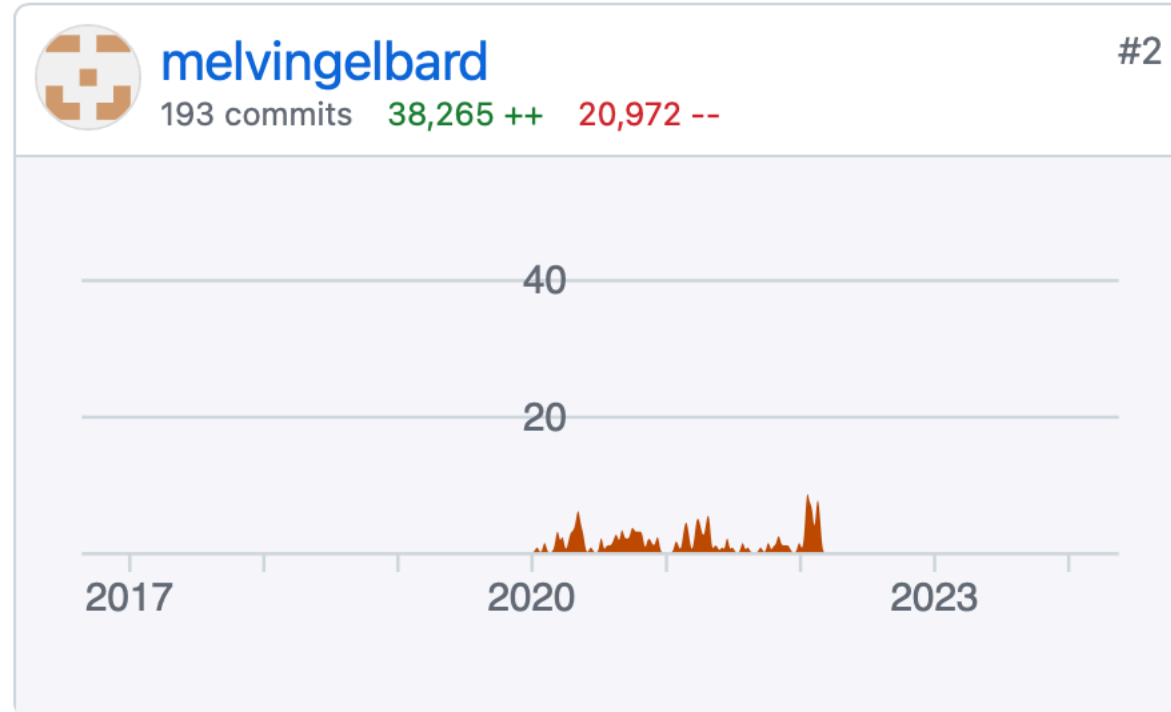# QuPath contributions are public on GitHub

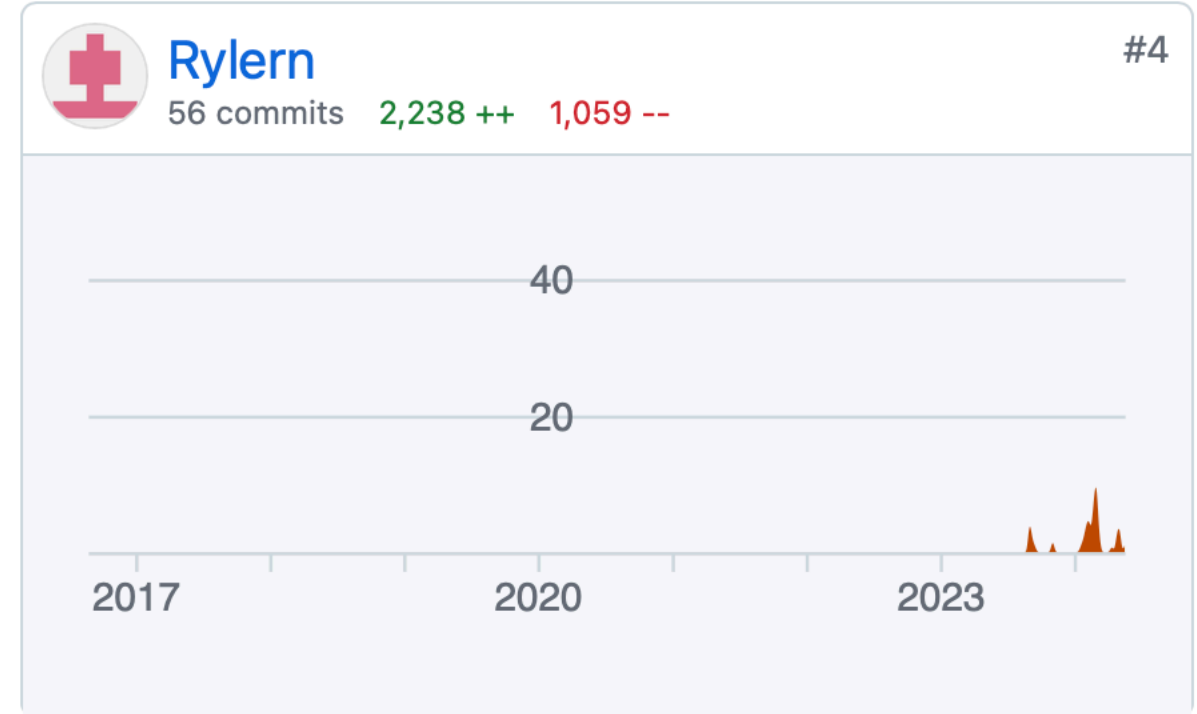# QuPath contributions are public on GitHub

QuPath contributions are public on GitHub

https://twitter.com/petebankhead/status/1357697513596346371

Pete Bankhead @petebankhead · Feb 5, 2021

The short version is that I single-handedly wrote the software as a postdoc but was blocked from releasing it open-source for years, while the environment in which I was working became increasingly toxic.

I handed in my notice as a last-ditch attempt to see it released. (2/n)

💬 2   🔁 6   ♡ 73   📊   🔖 ⬆️

Pete Bankhead @petebankhead · Feb 5, 2021

This worked – but meant I was out of academia, and my old group were free to take the credit.

Which they did.

It was strange to see people suddenly become huge fans of open science, speaking like they were my biggest supporters rather than the reason I left. (3/n)

💬 1   🔁 4   ♡ 67   📊   🔖 ⬆️

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https://twitter.com/petebankhead/status/1357697513596346371

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Pete Bankhead @petebankhead · Feb 5, 2021 ...

This was annoying but tolerable, until today I saw a new publication about QuPath's 'global impact' that changed my mind:
sciencedirect.com/science/articl...

I did not write this.

I did not know this was being written.

But it's based entirely on my work. (4/n)

💬 4   🔁 18   ♡ 92   ᴵˡⁱ   🔖 ↥

Pete Bankhead @petebankhead · Feb 5, 2021 ...

I know the authors.
They did not write a single line of code.
They did not answer a single user question on the forum.
They did not support its release.
They do not deserve the credit.

Everything they describe happened in the years since I left, because I left. (5/n)

💬 2   🔁 10   ♡ 114   ᴵˡⁱ   🔖 ↥

https://twitter.com/petebankhead/status/1357697513596346371

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Image Analysis Collaboratory

Pete Bankhead @petebankhead · Feb 5, 2021

It seems they've cleverly used the passive voice and their affiliation to create the impression they were instrumental in conceiving, developing and supporting the software.

They were not.

It's almost impressive they managed to write the paper without mentioning me once. (6/n)

💬 2   ↻ 6   ♡ 75   ᵢₗₗ   🔖 ⬆

Pete Bankhead @petebankhead · Feb 5, 2021

The truth is QuPath is open-source because I worked on it constantly over years, learned a new level of stubbornness, believed in it enough to leave two jobs – and because I have a partner who has supported me through the frustratingly unnecessary challenges of it all. (7/n)

💬 1   ↻ 8   ♡ 116   ᵢₗₗ   🔖 ⬆

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Image Analysis Collaboratory

Pete Bankhead @petebankhead · Feb 5, 2021

In the end, it's just software. Technology moves on quickly. Looking back, I'm not sure it was worth the personal cost.

But I hope it will make a difference: making biomedical research a bit more efficient, making AI a bit more accessible, making science a bit more open. (8/n)

💬 5   ♻ 5   ♡ 91   📊   🔖 ⬆

Pete Bankhead @petebankhead · Feb 5, 2021

If it does, it'll only be because of the things people do with it. Pathologists, biologists, and others with skills I'll never have, who need more than POC algorithms & expensive software to make the most of their imaging - working a bit better, discovering a bit faster. (9/n)

💬 1   ♻ 3   ♡ 77   📊   🔖 ⬆

Pete Bankhead @petebankhead · Feb 5, 2021

Now I'm older & a PI, I think more about why I stay in academia. It's mostly the many good people I've met & freedom to choose a career path according to my values.

I'm always happy to chat with similarly-minded folks about collaborating to do something we can believe in (10/10)

💬 29   ♻ 9   ♡ 230   📊   🔖 ⬆

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Timeline

2012: Pete joins Queen's University, Belfast, UK

2016: QuPath released as open-source

2017: Pete spends a year in industry

[Reference publication](#) for citing QuPath in

2018: Pete returns to academia

2021: Twitter thread

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https://twitter.com/petebankhead/status/1357697513596346371

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