

~~Challenges~~ Opportunities for computational research funding

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About me



**Software
engineer who
accidentally
found academia**

Previously: tech support -> industry (retail web development) -> academic spinout -> research software engineering.

Things I learned as an RSE I

**The only person who cares if my
code works is the person who
maintains it in the future (who
might also be me)...**

(Less than ideal!)

Things I learned as an RSE II

Funding is precarious 🥲

Things I learned as an RSE III

Code != papers

Things I learned as an RSE IV

**I was often considered "support
staff" and not a researcher**

Challenge → opportunity

Opportunity (for funders):

Treat code as a research output

In order to gain funding, researchers may (justifiably) feel the need to hide the code aspects of their work in a grant application, or not realise they are doing (or should be doing) software engineering / data science.

- [Digital infrastructure is crucial to scientific progress](#) (Khokhar, Mateen)
- [A path to the light: stopping 'secret' software, managing maintenance and evidencing impact](#) (Yehudi, Antonioletti, Graham, Brown, Sufi)

Opportunity (for funders):

RSEs are "roadies" for research

Recognise and reward talent by providing career pathways for all aspects of software engineering:

- Coders
- Technical writers
- Accessibility experts
- User experience (UX)
- Designers
- Community managers and trainers

Opportunity (for funders):

Save money by not re-inventing good wheels

How can we justify spending money on maintenance? 

👉 How can we not?!

Maintain software that exists and works, even if no new exciting features are added.

Opportunity (for RSEs):

Share your software for your own benefit

- Code developed for research is a research output and a research method.
- You can involve non-scientists and non-researchers in your code quite effectively, with initiatives like [Google Summer of Code](#), [Outreachy](#), [Hacktoberfest](#).
- Building **community** gives the chance for more bug reports, testing, better docs.

Improve the diversity of your teams

**Places where diversity tends to be
bad:**

- software engineering
- open source
- some research domains

We're at the intersection of these places!

To recap:

- Code is a **research method** and a **research output**
- RSE **careers** need to be valued
- Software needs explicit **maintenance** funding

Wellcome Trust

Wellcome supports science to solve the urgent health challenges facing everyone.

We support discovery research into life, health and wellbeing, and we're taking on three worldwide health challenges: mental health, infectious disease and climate.

Thank you

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