

Research Software Engineer

UK-2026-RSE-1

Call for Applications

[Topos Institute](#) is looking for two Research Software Engineers to join its research software engineering team, based in **Oxford, UK**.

Summary

Topos UK, a non-profit research institute, is building a research software engineering team in Oxford.

The team will focus on difficult technical problems for clients — organisations and individuals operating at the forefront of their domains, whose problems call for new ideas, mathematically sophisticated approaches, and good engineering. The team will work at the interface between mathematical research and client-driven problem solving: getting to know a client's domain well enough to see its underlying structure, drawing on or expanding Topos' wealth of research to find a suitable approach, and building software that solves the task at hand. In this way, client work and Topos' research endeavours inform one another: client problems suggest new research directions, and research supplies new ways of attacking those problems.

- **Title:** Research Software Engineer
- **Location:** Oxford, UK (on-site)
- **Employment type:** 1.0 FTE
- **Salary:** £65,000 – 85,000 depending on level

Topos is committed to building a team with diverse perspectives and life experiences, so those with personal or professional backgrounds underrepresented at Topos are highly encouraged to apply.

Further information about Topos Institute, including our [Blog](#) and [YouTube](#) pages, can be found on our website: topos.institute.

About the position

You will be one of two new members of this team, which is led by our principal research software engineer, tsilil clingman, and presently includes a senior software engineer, Kaspar Bumke. In the long term your work will be entirely client-driven; in the near term, part of it will be on CatColab.

[CatColab](#) is a collaboration platform for modelling and programming in domain-specific categorical logics, written in Rust and TypeScript, with a mathematical core based on double-categorical logic and systems theory. It is also our principal research vehicle, demonstrating that a mathematically sophisticated approach to declarative modelling, compositionality, human legibility and collaboration can be built into high-quality software.

Responsibilities

We are open to hiring along a spectrum of experience levels. At the entry level, roughly corresponding to the lower portion of the salary band, responsibilities include:

- Working with the team to turn clients' problems into well-defined and delivered research engineering work
- Bringing mathematical ideas to bear on engineering problems
- Building working, maintainable, well-documented research software for clients
- Developing CatColab alongside Topos' researchers: turning new mathematics into software capabilities for modellers and programmers

At the experienced level, roughly corresponding to the upper portion of the salary band, the role further encompasses:

- Shaping open-ended client problems into technical plans: scoping, estimating and sequencing the work
- Owning the technical design of a project or part of one, and being accountable for its quality and delivery
- Working directly with clients, and acting as a point of contact for them
- Guiding others' work and supporting their growth

We believe that a strong candidate at the entry level will have significant potential to increase the purview of their role over time, and we are committed to supporting and mentoring that growth.

About you

You might fit the following two descriptions, or some combination thereof.

- You are a strong software engineer with evident mathematical curiosity, demonstrated by self-study, personal projects, the languages and tools you choose to work with, or other facets.
- You have a strong mathematical background, ideally with overlap in Topos' research areas, and you have demonstrable software engineering skills.

We believe that capable people can learn whatever they need, so we don't expect you to arrive knowing everything listed below. That said, curiosity for or familiarity with any of the following is welcome:

- Programming: Rust, Haskell, TypeScript, or other strongly typed languages.
- Software engineering: working on a shared codebase with version control, code review, automated testing and continuous integration, dependency and build management, databases.
- Mathematics: category theory, type theory, statistics, declarative modelling.

Finally, we look for:

- Clear verbal and written communication, including with people outside your discipline.
- The ability to contextualise work in its wider cultural, social and ethical context.
- Enthusiasm for working in-person with a small but vibrant office in Oxford, UK, and collaborating with a similarly-sized office in Berkeley, CA.

At the experienced level, we additionally look for maturity in building software and handling responsibility, including planning solutions and working directly with clients or external stakeholders. Offers at the upper end of the salary band are made to candidates who demonstrate this and meet the experience criteria above or, in exceptional cases, other equivalent criteria aligning with organisational priorities.

There is evidence to suggest that women and people of colour are less likely to apply for jobs unless they believe they meet every one of the qualifications as described in the job description. If this role speaks to you, we encourage you to apply, even if you don't believe you tick all the boxes.

Eligibility criteria

Topos will consider sponsoring UK visas for applicants. Please include details of your visa requirements (if any) in your application (e.g. in your cover letter).

All qualified applicants will receive consideration for employment without regard to race, colour, religion, sex, sexual orientation, gender identity, national origin, or disability.

Us and you

We are dedicated to shaping the future of technology to ensure a more equitable and just world, and we believe that a technology that supports a healthy society can only be built by an organisation that supports its team members. As such, Topos is committed to ensuring that we clearly and compassionately negotiate your role and responsibilities while you're at Topos, and then ensuring that you have the support that you need to fulfil that role.

Topos UK offers benefits including private health and dental insurance, 30 days paid holiday (plus public holidays), and a variable pension plan.

Why Topos?

Exceptional Team. Collaborate with world-leading researchers and high calibre funding agencies.

Inclusive Environment. Be part of building a diverse team where different perspectives are valued and everyone can contribute their best work.

Meaningful Impact. Participate in breakthrough research software engineering on humanity's most pressing challenges—from climate change to public health to collaborative open science.

Technical Innovation. Support the development of genuinely novel technologies that could transform how humanity approaches complex, collaborative decision-making.

Supportive Culture. Join a caring, inquiry-driven community that values both intellectual rigor and personal wellbeing, with a strong focus on in-person office culture but flexibility to support work-life balance.

Growth Opportunity. Shape a team poised for significant expansion and impact.

Application process

To apply for this position, please email **UK-2026-RSE-1@topos.institute** with the subject line “**UK-2026-RSE-1**” and two PDF attachments:

- a copy of your CV; and
- a cover letter **including the contact details for two references** who we can contact.

Your cover letter might describe your interest in the Topos Institute and this position, your professional experience, your future goals, your specific relevant experience, and

your potential contribution to a diverse and inclusive environment at Topos. Please feel free also to convey any information about preferred names and pronouns.

Please note that we will **not** contact your references without first notifying you.

We will review applications on a rolling basis.

If you have any questions about the application, or the role in general, please email **UK-2026-RSE-1@topos.institute**.