



ALFRED P. SLOAN  
FOUNDATION

## Call for submissions **Metascience and AI postdoctoral fellowship**

*Grants of up to \$250,000 (USD) over up to two years will be awarded to social sciences and humanities postdoctoral researchers who study the implications of AI for Science*

Submission Deadline: April 10, 2025 5pm ET

[Apply here](#)

### **Key dates / timeline**

Application opens on February 13, 2025, 9am ET

Optional virtual “office hours” on March 14, 2025, 1pm ET

Application closes on April 10, 2025, 5pm ET

## What we are looking for

This is a postdoctoral fellowship program for grants of up to \$250,000 USD to support early career researchers in the social sciences and humanities (with particular emphasis on philosophy, sociology of science, and metascience) who are interested in building a career in understanding the implications of AI for the science and research ecosystem.

AI (currently understood as a set of technologies including machine learning, deep learning, and foundation models) could accelerate scientific discovery, whether through narrow applications like DeepMind's AlphaFold, or general applications such as advances in AI-enabled lab robotics, evidence synthesis, or statistical inference. There are many practical and technical challenges to solve before society has fully-fledged autonomous 'AI scientists'. Nevertheless, it seems inevitable that over the coming years public and private R&D funders will make significant investments both to diffuse and adopt AI technologies, and to solve technical challenges, in the direction of a more heavily AI-mediated research.

This program will support a cohort of postdoctoral researchers to deepen their understanding of AI technology and pursue career paths which evaluate the phenomenon of AI-mediated science and guide its pursuit, covering one or more of the following objectives:

- building our understanding of how the growing adoption of AI is changing the research landscape and the day-to-day work of researchers;
- building our understanding of the epistemic, metascientific, ethical and/or socioeconomic implications of these changes; and
- building understanding of how governments, industry, and/or funding organizations should respond to improve our research landscape.

The following are some indicative examples of topic areas of interest:

- The impact of AI on the topics and methods of scientific research, and how this varies across disciplines
- AI and the pace of scientific progress
- Explainability and alignment in scientific AI
- The skills and training implications of scientific AI
- The role of humans in AI-driven science
- Epistemic and ethical considerations concerning the application of AI in the production of research outputs and the assessment of research

This program will not fund fellows whose primary research focus is the direct development of scientific AI tools. However, given the rapidly evolving landscape of AI technology and the importance of understanding its actual nature when practically engaging with the topics above, applicants are strongly encouraged to identify research organizations and/or industry-based opportunities for technical training and mentorship (either at the host institution or elsewhere) and note these in their application. Applicants including such opportunities in their proposal must obtain the consent of any named individual or organization before submitting their application. We will also support and encourage our fellows to deeply engage with those at the technological frontier through our summer school and other opportunities.

This program aims to support researchers uniquely interested in AI's impact on science and the research ecosystem, rather than general AI ethics, safety and society-related topics; not because these general topics are not important within and beyond science, but because they are covered much more substantially elsewhere. Topics that might be considered too general include broad examinations of data and algorithmic bias; AI-generated disinformation; dual use of AI tech; environmental costs of AI; or applications of AI to other industries like clinical medicine, law or fintech rather than to the activities uniquely undertaken in scientific research. Existing funding opportunities are available for general research in AI across a broad range of public and philanthropic funding bodies.

## Who is eligible to apply

The funding opportunity is open to early career researchers who will have completed their PhD by the start date of the fellowship or who can demonstrate equivalent research or innovation experience, and who do not yet hold a permanent or tenure-track academic position.

This fellowship program is intended for researchers who are uniquely interested in AI's impact on science, rather than general AI ethics, safety and society-related topics (as these are covered substantially elsewhere).

## Who is not eligible to apply

This program will not fund fellows whose primary research objective involves working directly on scientific AI tool development.

UK-based applicants should apply through UKRI, who is funding a parallel cohort of fellows to be funded by the UK Metascience Unit. We will not be accepting UK-based applicants through the Sloan Foundation . UKRI's portal can be found here:

<https://www.ukri.org/opportunity/ukri-metascience-ai-early-career-fellowships/>.

Eligible host institutions include non-profit two-and four-year institutions, institutional systems or consortia of institutions, university-affiliated research centers or laboratories, and independent nonprofit

research organizations. While open to international applicants, particular consideration will be given to applicants whose host institution will be based in the US and Canada. Submissions led by women and Black, Indigenous, and Latine individuals are strongly encouraged.

## Duration

The duration of this award is up to 2 years, not to extend beyond Summer 2027. Fellowships must start by September 30, 2025.

### **Time commitment**

These awards are intended to allow fellows protected time to concentrate fully on their research or innovation, training and development. In most cases a fellow is expected to spend 100% of their working time on their fellowship (which includes all activities associated with the fellowship).

### **AI and Metascience Summer School**

This fellowship program is expected to include the opportunity for all fellows to attend a fully funded residential 1-2 week summer school in 2026, delivered in partnership with UKRI. The summer school is likely to be held in the US (date and location TBC). The summer school will bring together a transatlantic community of researchers in this field to facilitate collaboration and exchange of ideas. The event will feature teach-ins from leading experts in AI for Science, AI philosophy, metascience and more, to ensure fellows' research is up to date in this fast-moving field. Please note that you do not need to budget for this opportunity in your application.

## Provision of a mentor

All applicants are required to have a faculty mentor based at the research organization where the grant is to be held. The proposed faculty mentor should have a strong interest in the applicant's field of research and should be able to offer the applicant advice and assistance in developing their application, building suitable links with leading researchers in their field, as well as with potential beneficiaries and users of the applicant's research.

The role of the faculty mentor is to support the work of the fellow. They will not be directly involved in running any fellowship project. Regular contact must be outlined in the proposal and maintained between the fellow and faculty mentor through the course of the project, and the mentor will help the fellow to review progress against agreed milestones, including the implementation of training and development.

Costs for the faculty mentor's time cannot be claimed as part of these grants; they must be met as part of the host institution's contribution to the award. Please be sure to confirm any institutional requirements in the Faculty Mentor's letter of support.

## Generative artificial intelligence (AI)

Use of generative AI tools to prepare funding applications is permitted, however, caution should be applied. While the Sloan Foundation has no formal policy on the use of generative AI tools by applicants, the UKRI policy on [the use of generative AI in application and assessment](#) offers some useful guidance.

## Submission Components

Please submit your application via SMAApply:

[https://apply.sloan.org/prog/call\\_for\\_submissions\\_metascience\\_and\\_ai\\_postdoctoral\\_fellowship](https://apply.sloan.org/prog/call_for_submissions_metascience_and_ai_postdoctoral_fellowship)

A preview of the questions are provided below.

### **Vision**

Word limit: [750]

What are you hoping to achieve with your fellowship period? Explain your research questions and how they:

- are of excellent quality and importance in the context of clearly identified fields and disciplines
- have the potential to advance current understanding, or generate new knowledge, thinking or discovery within or beyond those fields and disciplines
- are timely, given current trends, context, and needs
- meet the scope of the fellowship as described above

### **Approach**

Word limit: [1250]

How are you going to approach your proposed fellowship period? Explain how you have designed your research so that it:

- is effective and appropriate to achieve your objectives
- is feasible, and comprehensively identifies any risks to delivery and how you will manage them
- uses a clearly written and transparent methodology
- summarizes the previous work and describes how you will build on and progress this work
- will maximize translation of outputs into outcomes and impacts

## **Career development and resources**

Word limit: [1000]

Please describe:

- your current relevant skills and expertise
- career development goals appropriate to the fellowship funding opportunity
- how the fellowship will provide a feasible and appropriate trajectory for your personal development and to achieve your stated career development goals (as appropriate to your career stage and field)
- the suitability of the host organization and its strategic relevance to the project
- any additional technical training opportunities, mentorship, or support identified for the fellowship period from academic, industry, government, NGO, or other organizations or individuals.
- how you will instigate positive change in the wider research and innovation community

In addition, please upload a brief (3 page maximum) CV.

## **Host organization and other letters of support**

Upload a single PDF of no more than 3 pages containing a statement from your primary mentor detailing their personal and institutional commitment to this application and why they (and any additional mentors) are the most appropriate person or people to support you. This should include:

- signals of commitment to mentorship and other support through the Fellowship period
- evidence detailing how the mentor will support you, as appropriate for your career development and the vision and approach of the fellowship
- how the host organization will ensure your time commitment to the fellowship is protected
- what development and training opportunities will be provided (with emphasis on both disciplinary and technical expertise) and how they form a cohesive career development package tailored to your aims and aspirations
- what financial or practical support, such as access to the appropriate services, facilities, infrastructure, or equipment, is being provided and how this strengthens your application

Though not required, up to three additional letters of support from organizations or individuals who will support the fellow are welcome here as well.

## **Budget**

Word limit: [250]

Please upload a tabular budget in the Sloan Budget template available [here](#).

Briefly explain the major budget lines and expected costs, including:

- Salary and benefits commensurate with similar positions at the host organization
- Any travel for fieldwork, collaboration, or conferences
- Any facilities, computing, or infrastructure costs
- Training costs
- Indirect/overhead\*

\*Up to 20% overhead or indirect for the host institution is allowed on top of direct budget lines (i.e. a maximum of \$41,666 on direct expenses of \$208,330). Please also note any contributions (direct or in-kind) from the host institution.

## Deadline

**Your application must be submitted by 5pm ET on April 10, 2025. You will not be able to apply after this time.**

Following the submission of your application to the funding opportunity, your application cannot be changed, and applications will not be returned for amendment. If your application does not follow the guidance, it may be rejected.

Please direct any questions to [technology@sloan.org](mailto:technology@sloan.org), titled “Metascience and AI”. Please note that we do not have the capacity to take calls regarding individual submissions. General questions will be answered at the virtual office hours on March 14, 2025, at 1pm ET.

## About the Alfred P. Sloan Foundation

The Alfred P. Sloan Foundation is a nonpartisan not-for-profit, grantmaking institution dedicated to improving the welfare of all through the advancement of scientific knowledge. Established in 1934 by Alfred Pritchard Sloan Jr., then-President and Chief Executive Officer of the General Motors Corporation, the Foundation makes grants in four broad areas: direct support of research in science, technology, engineering, mathematics, and economics; initiatives to increase the quality and diversity of scientific institutions and the science workforce; projects to develop or leverage technology to empower research; and efforts to enhance and deepen public engagement with science and scientists.

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