

# 2025 REQUEST FOR PROPOSALS

## THE PROPELLING ORIGINAL DATA SCIENCE (PODS) PROGRAM

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### Scientific Scope

The [Propelling Original Data Science \(PODS\) program](#) aims to enable data science and artificial intelligence (AI) methodology research and its applications that addresses domain research questions with significant scientific and / or societal impact.

In the 2025 round, we seek proposals for three tracks:

#### Track 1: Data Science and AI Methodology and Applications

Up to 6 projects will be funded. Please note that all health-related research will be funded through Track 3.

The projects will need to fit within any of the following types:

- **Basic research and technology development** in data science and AI to advance data, analytics and modeling that can benefit a range of applications;
- **Addressing a domain research question** with a novel data science, analytics or AI approach in a significantly different way from current, “mainstream”, research;
- **Developing technical solutions** for the responsible and ethical use of data and AI, and to improve the rigor and reproducibility of data- and AI-intensive research;
- **Improving the U-M data science and AI research ecosystem**, including, but not limited to:
  - Developing major datasets to enable the investigation of many new research questions;
  - Developing tools to improve the data / AI research lifecycle, such as for data discovery, curation, preparation, and trustworthy computing and analytics.
  - Outputs of this type of projects should be made readily available to the U-M research community.

#### Track 2: Accelerating Responsible AI Research Ecosystems

Up to 4 projects will be funded through a generous gift from Microsoft. Projects in this track are excluded from cost-share requirements.

Given the significant advances of AI and its enormous impact on research and society, responsible AI and appropriate AI policy are of utmost importance. This Microsoft gift is part of a

collaboration between the Microsoft Office of Responsible AI and key university partners targeting Responsible AI best practices for the community. Specifically we seek to fund projects that address one of the following key issues:

- Developing frameworks / tools that address the impact of AI on society / communities in the public domain
- Developing training and education on responsible AI for research
- Developing training and best practices for research community on socio-technical research practices
- Policy challenges and solutions specific to small or medium language models
- Audit strategies, particularly in high-stakes domains, such as finance or healthcare
- Governance solutions and best safety practices with respect to open-source models or AI software
- Effective licensing regimes for governing frontier AI systems
- Scalable and adaptable conformance verification frameworks that can adapt to emerging and evolving standards
- Domain-specific policy problems and solutions for generative AI systems in highly regulated domains.
- In addition to the above topics, we also invite proposals that offer novel approaches to developing standards or international cooperation frameworks, covering aspects such as benchmarking, content authentication, safety and risk mitigation.

### **Track 3: Health Science and Health Policy**

Up to 10 projects will be funded jointly by MIDAS, [MICHR](#) and [IHPI](#). Projects in this track should focus on developing and / or applying data science and AI methods to advance health science, or to address health AI policy. Specifically, they should fit within one or more of the following three priority areas:

#### **Track 3A: AI Innovations in Clinical and Translational Sciences (CTS) (jointly funded by MICHR and MIDAS)**

CTS focuses on improving researchers' methods and enabling more robust engagement of patients and participants in research. Examples of CTS applications might include:

- Impact of AI on research facilitation, including the development of informatics tools and AI methodologies to streamline research processes, enhance data interoperability, and improve research reproducibility and transparency.
- AI-driven approaches to patient and participant engagement, such as personalized recruitment, retention, and informed consent strategies.
- Applications of synthetic data in research, including novel methodologies that address privacy concerns while enabling scalable solutions for healthcare datasets.
- AI-enabled optimization of research workflows, identifying bottlenecks and implementing innovative solutions to enhance efficiency.

### Track 3B: AI Impact and Governance for Health Policy and Healthcare (jointly funded by IHPI and MIDAS)

In order to ensure that AI is designed, applied, and translated in healthcare settings in a way that is equitable, effective, and fair, there must be appropriate policy and governance mechanisms. Areas of particular interest include:

- Impact of AI on care delivery, access to care, or health outcomes
- Studies to inform best practices for AI governance and policy for healthcare settings, payors, and/or other healthcare related organizations
- Patient perspectives, impact, and trust, surrounding the training and use of AI in clinical settings
- Liability and other regulatory considerations for clinicians implementing AI technologies with patients
- Impact of AI on healthcare research including research integrity and data sharing
- Novel policy and governance considerations of generative AI development and applications in healthcare
- Interactions between different levels of health AI governance (e.g., national-, regional-, local-, and provider-level)
- Audit strategies for AI systems in healthcare to ensure equitable, effective, and fair use of AI.

### Track 3C: Data Science and AI for Health Science and Healthcare Research

This track is broadly defined to include basic, translational, clinical and population health research that does not fit in priority areas A or B above and involves:

- Data science and AI methodology development;
- Addressing a significant research question with a novel data science, analytics or AI approach;
- Developing technical solutions for the responsible and ethical use of data and AI, and to improve the rigor and reproducibility of research;
- Improving the U-M research ecosystem.

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## Research Impact

We are particularly interested in funding pioneering work that promises broad impact, major expansion, and / or contributes to the U-M data science and AI community. Some examples of major impacts include:

- **Follow-on expansion.** A concrete plan to submit a major external grant application within one year of receiving PODS funding would be a strong indication, though not the

only one, of the potential for follow-on expansion. For example, the research team may articulate how this pilot will prepare them for a major grant proposal. In the transition plan (see “How to Apply”), applicants may identify the specific target grant opportunity and the application timeline.

- **Future impact.** Applicants should articulate how the line of research started with the PODS funding will in the long run have major implications for a research field or a national / regional priority topic.
- **Contribution to the campus research community.** All proposals, not just those on improving the U-M research ecosystem, are encouraged to include a section on how the outcomes of their projects can benefit the campus research community. Examples include, but are not limited to, building datasets that can enable new projects by other U-M researchers; disseminating novel methodology among U-M researchers; research activities during the project duration that will connect research groups / units through the novel use of data science and AI methods.

## What We Discourage

- Incremental research.
  - Application of a standard data science or AI method in a standard way to a domain research question. In other words, the lack of innovation or significance on how a domain research question is addressed.
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## Review Criteria

- Innovative concept and/or approach;
  - The significance of the research questions;
  - The fit with the themes of this funding program;
  - Establishment of a new collaboration across disciplines;
  - Likelihood of success;
  - Impact on the research field and on the U-M data science and AI research ecosystem;
  - Potential for major expansion, external funding and/or commercialization.
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## Award Information

Projects will be awarded for a duration of 12-18 months, based on a competitive process.

**Tracks 1 and 3:** Two models of funding are available: 1) Under \$30K, MIDAS and partner organizations will provide 100% of the funding, with no cost-share required. 2) \$30K-\$70K, with cost-share above the first \$30K in a ratio of 1:1. For example, if you request \$70K, your cost-share portion will be \$20K, and the funders will provide \$30K base + \$20K cost-share match = \$50K. The project team is responsible for securing cost-share from individual research accounts or unit contributions.

**Track 2:** Track 2 does not have a cost-share requirement. Proposals in Track 2 can request up to \$70K of funding which will be provided by the gift from Microsoft. In addition, Microsoft Azure computing credits will be available to the award recipients (please specify this in the budget).

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## Eligibility

Principal Investigators (PIs) and co-PIs should be U-M (Ann Arbor, Dearborn, Flint) researchers who are eligible to apply for federal grants, and should not have been a PI or co-PI of a MIDAS grant awarded on or after May 2023. An individual may participate as PI / co-PI on only one proposal. Co-investigators, consultants and other personnel are not limited by this restriction. All PIs and co-PIs should be [MIDAS affiliate members](#). For Track 3B, at least one of the PI's should be an IHPI member.

We strongly encourage collaborative proposals with at least two PI / co-PIs from more than one discipline and preferably from more than one department.

Letters of Intent (LOIs), due April 4th, 2025 at 11:59 PM EST, must be submitted prior to the Full Proposal deadline (May 9th, 2025 at 11:59 PM EST) to be considered for PODS review.

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## Important Dates

- **11:59 pm, April 4, 2025:** Letters of intent due
- **11:59 pm, May 9, 2025:** Full Proposals for TRACK 1 and TRACK 3 due
- **11:59 pm, May 19, 2025:** Full Proposals for TRACK 2 due
- **By July 1, 2025:** Awards announced
- **By August 1, 2025:** Projects start

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## How to Apply

**Letters of intent** should be submitted through [this form](#). The letters will not be evaluated during full proposal review. The purpose of the letter is to confirm eligibility and the fit of proposed research ideas, for proposers to get early feedback to avoid common pitfalls, and for MIDAS to plan for reviewer assignments. The letter should be one .pdf file containing the following:

1. The tentative title of the proposal.
2. The names and affiliations of the PI and co-PIs (co-PIs may change in the full proposal).
3. An abstract (up to 300 words), including which track the proposal will be submitted to and the anticipated research impact (such as the three listed above in “Research Impact”, or others not listed).
4. Up to six keywords.

**The full proposal** should be 1 PDF file submitted through this form, containing the following components. Incomplete applications will not be reviewed.

1. Project summary, up to three sentences in non-technical language. This will be made public (for example, on MIDAS website) if the project is awarded.
2. Up to six keywords.
3. An abstract (up to 300 words), including which track the proposal is submitted to and the anticipated research impact (such as the three listed above in “Research Impact”, or others not listed).
4. Project description (up to 6 pages), with the font size of 10 or above. This should include the following components in any order or format, research questions / aims, background, significance and innovation, and methods.
5. A transition plan (up to ½ page) that describes the strategy for follow-on funding and activities, such as external grants, continuing research plan, data products and/or commercialization.
6. A Statement of Societal Impact (up to ½ page) that describes how this project will benefit the society, and, if any, potential negative impact that needs to be mitigated.
7. References (no page limit).
8. Biosketch in [NSF](#) or [NIH format](#) for all senior personnel. In addition, all U-M internal grant awards received since 2019 should be listed (this can be on an additional page).
9. A detailed budget and budget justification. You may use [our template](#) or any other template of your choice. Be sure to include projected Budget Start and End dates. Awarded projects are expected to begin by August 1, 2025.
10. If applicable, proof of cost-share (such as a letter from the department chair or a statement about the PI’s research account).
11. If an IRB is required for the project, include a description of the status of the IRB application.

*Before submission, applicants are welcome to discuss with MIDAS 1) how we can support their external proposal regardless of whether they receive our pilot funding; 2) if they would like MIDAS to help identify interdisciplinary collaborators; and 3) how to collaborate with MIDAS to build synergy and for dissemination of research outcomes.*

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## Program Partners



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## Questions? Contact Us.

For questions, please contact: [midas-research@umich.edu](mailto:midas-research@umich.edu)