
PROGRAM DESCRIPTION

The **Collaborative Seed Funding Grant program**, sponsored by the **School of Data Science and Open Cloud Institute** is a grant opportunity offered to support UTSA School of Data Science (SDS) core and affiliated faculty members to engage in scholarly research activities that foster collaborations in AI Security, Safety, and Computing. The primary goal of these awards is to assemble data that can be used to seed extramural funding and advances SDS mission.

TARGETED RESEARCH

Generative Artificial Intelligence (AI) has emerged as a transformative force, offering unprecedented capabilities in generating realistic text, videos, and code. It can also simulate human interactions and automate complex decision-making processes. However, the rapid advancement and deployment of these technologies have also unveiled significant security challenges that necessitate urgent attention from academia, industry, and policymakers. One of the most pressing concerns is the issue of data integrity. The quality and authenticity of large-scale data used to train generative AI models are fundamental to their reliability and effectiveness. Compromised or maliciously tampered data can lead to skewed, biased, or completely inaccurate outputs, undermining the technology's credibility and utility. These vulnerabilities can be exploited for malicious purposes, including misinformation, intellectual property theft, or even cyber-physical attacks. The potential for national security threats is particularly concerning. Adversaries, including nation-states, could manipulate AI models by analyzing public opinion, supply chains, or economic trends to destabilize societies or cripple critical infrastructure. Intellectual property theft is another significant security risk, as trained AI models represent valuable economic assets. Unauthorized access to these models could compromise classified information or even national security secrets. Further complicating the landscape is the challenge of model reliability and aligning these powerful models with positive human values during decision-making. Generative AI, while adept at learning patterns from human data, may struggle to grasp the nuances of ethical decision-making and behavior. This raises concerns about potential biases or discriminatory outcomes, particularly when these models are entrusted with critical choices in areas like national security, healthcare, finance, or criminal justice. The recent Executive Order on Safe and Secure Development and Use of Artificial Intelligence highlights the growing recognition of these challenges and the need for a comprehensive approach to generative AI security.

Preferences will be given to proposals that:

- Align with the goals, mission, and impact of the SDS and OCI in the realm of AI security, safety, and computing
- Enhance collaboration and research partnerships among SDS Core faculty members from different departments focusing on AI security
- Are dedicated to investigating the implications of AI security and safety on societal problems
- Have a high potential for extramural funding

Seed funding received through this program is intended to strengthen competitiveness for the pursuit of long-term extramural funds. Successful applicants must produce a new proposal for extramural funding as a final reporting requirement within 6 months after completion of the seed grant award.

COLLABORATION REQUIREMENT

Proposals must include two SDS Core Faculty or Faculty Affiliates as Principal Investigators (PIs), each from different UTSA departments. Enhanced collaboration and research partnerships among SDS Core faculty members from various departments are encouraged. Preference will be given to assistant or associate professors who aim to advance their research careers in AI security and safety.

ELIGIBILITY AND APPLICATION LIMITS

- The PI must be a UTSA tenure-track or tenured SDS core faculty.
- PI's may only submit one proposal as the designated PI (primary applicant) but may serve as senior investigator (SI) on multiple applications.

The following are ineligible for funding through the **SDS AI Security and Safety Collaborative Seed Funding Grant**:

- Projects serving as gap funding to bridge support between external grants or contracts
- Project overlapping with other existing and/or pending research projects.

AWARD INFORMATION

- **Maximum total funding per project:** \$35,000
- **Expected number of awards:** 3
- **Performance Period:** July 1, 2024 to December 31, 2024
*Funding not spent by December 1, 2024, will automatically revert back to the originating funding source. Project extensions require written approval and contingent on the timeline of the larger project funding.

PROGRAM TIMELINE

May 15, 2024	Request for Proposals released
June 3, 2024	Applications Due
June 4 - June 14, 2024	Proposal Review
June 14, 2024	Awards Announced
July 1, 2024	Grant Performance Period Begins
July 2024	Present the initial plan at the SDS Summer Research Immersion Program
October 2024	Present interim findings at the 2 nd Annual Los Datos Conference
December 31, 2024	All Funds Must be Spent
January 31, 2025	Final Project Report Due

PROPOSAL ROUTING AND SUBMISSION INSTRUCTIONS

For simplicity, the SDS in collaboration with the Office of Research will be leading the administration and collection efforts for this grant program. PIs must submit a single combined proposal via the Office of Research [InfoReady Site](#). Ensure your application is submitted by **5:00 PM CST on June 3, 2024**.

You do not need to:

- Route application through the College Research Administrators utilizing the standard process.

APPLICATION COMPONENTS

1. Abstract (250 word limit)

InfoReady will prompt you to include a clear executive summary (or abstract) that summarizes the essential content of the proposed research effort, including the objectives, benefits, and significance.

2. Project Description (2 page limit)

The project description attachment must include, in this order:

- General background

- Description of how the research evaluates or impacts AI security and safety, or its societal implications.
- Specific goals, objectives, methods, and anticipated results
- Plan for extramural support including the sponsor/program, team, and application timeline.

3. Key References (1 page limit)

Attach a list of references relevant to the project.

4. Joint Work Plan (1 page limit including graphics)

- Attach a summary of task-level activities to be performed by PIs as they relate to the overall project's objectives.
- Describe areas of interdependence, the coordination and handoff of interim project materials and data, and the timeline of each organization's participation in the overall project effort.
- While no specific graphical format or presentation is required, this section is expected to contain a mixture of narrative and graphical information (preferably in a Gantt Chart) to aid the evaluators' assessment of the proposed scope, roles, and responsibilities within the team, and collaboration environment.

5. Budget

Budget must be submitted solely using the [UTSA approved budget template](#).

6. Budget Justification (1 page limit)

Details for all proposed expenditures must be described in a budget justification attachment. This document must convey an integrated understanding of the types of resources (labor, materials, other) necessary to complete the proposed research project. For each line item and provide detailed calculations of how you arrived at totals/estimates.

Budget Considerations:

- It is highly encouraged that the budget should balance funding between both PIs.
- The proposal must allocate support for at least one PhD student, with a minimum Graduate Research Assistanship (GRA) of \$5,000.

Funds **can** be used for the following:

- Salaries and/or wages for UTSA faculty, staff, or students.
- Materials and supplies (any item with a cost of less than \$5,000/unit; must be justified as needed for project success)
- Expenses for data collection, archival research, training, educational purposes and/or presentations on research, creative, or scholarly activities directly related to the proposed project
- Consultant fees
- Domestic travel for data collection
- Participant stipends
- Expenses for food or drink must follow UTSA guidelines

Funds **cannot** be used for the following:

- International travel

If additional resources are available to support this project through other sources, the budget justification should include a list of these resources, noting when the resource will be available and who it will be provided by. Examples include lab or studio time, equipment, cloud resources, and research assistantships made available through a department, as well as support obtained from external sources. Note: While additional resources can be listed, no formal cost-sharing is allowed.

7. Biographical Sketch (2 page NSF Biosketch per person)

Biographical sketch attachments must be included for the PIs (primary applicants), and any key personnel using NSF formatting.

8. Grant Agreement (See end of this document)

Each UTSA PI and UTSA key personnel must have this document signed by their direct supervisor (i.e. Department Chair or Director), acknowledging that they have also read all responsibilities and obligations of the applicant and their department or division.

PEER REVIEW

Applications will be reviewed by an internal review committee established by the SDS. This committee is appointed by the SDS Director and leadership.

- Committee members will be from a variety of academic, practice, and scientific backgrounds. As such, proposals should be clearly written in a way that the goals, rationale, and methods of the proposed work can be understood by all reviewers. Avoid discipline-specific terminology/jargon as much as possible.
- The review committee will review proposals and make recommendations to the SDS ADR. Funding decisions will be based primarily on the Committee’s recommendations; however, final decisions will rest with the SDS leadership.
- Proposals will be evaluated based on the weighted criteria below. The PI (primary applicant) should include all required proposal components and fully and clearly address each criterion.

Review Criteria	Max Point Allocation
Does the proposal provide strong justification for the intellectual merit and significance of this research?	15
Are the overall strategy, methodology, and analyses well-reasoned and appropriate to accomplish the project objectives?	15
Are the goals, objectives, and anticipated results stated clearly and are they reasonable, given the funds, and time provided?	10
Did the proposal address a feasible plan to obtain extramural funding to support the project in future years?	10
Did the proposal demonstrate the potential to enhance collaboration and research partnerships among SDS Core faculty members from different departments focusing on AI security	10
Does the proposal budget balance resources across PIs (different departments)?	10
Did the proposal describe the broader impact on the AI and Security community?	5
Does research avoid overlap with currently funded projects?	5
Are potential difficulties, alternative strategies, and benchmarks for success presented?	5
Did the proposal specify the resources needed for this project (labor, equipment, materials, etc.) and indicate their availability?	5

Did the proposal outline a spending plan and thoroughly address each expenditure with a clear justification and calculations? Do proposed costs align with the proposed scope of work?	5
Did the applicant (or team) convey through their biographical sketches that they have appropriate experience and training? And have they demonstrated an ongoing record of accomplishments that have advanced their field(s)?	5
Did the proposal include principal investigators from SDS core faculty across various UTSA departments?	Pass/Fail*
Did the proposal align with the goals, mission, and impact of the SDS and forthcoming AI college?	Pass/Fail*
Does the Budget and Budget Justification meet criteria (e.g., \$30,000 limit, budget restrictions, etc.)?	Pass/Fail*
Total Points Possible	100

***Any proposal that receives a “fail” rating on any of the criteria, will not be eligible for review.**

GRANT ADMINISTRATION

Each PI (primary applicant) is responsible for the administration of grant funds. All grant expenditures must conform to state and university regulations and approvals. In particular, the PI must be certain that over-expenditures do not occur, and that all funds are fully expended according to programmatic deadlines. All work must be completed within the performance period.

FINAL REPORTING REQUIREMENTS

Applicants awarded funding under this opportunity will be required to submit their final report to the SDS by January 31, 2025. Awardees will be provided final reporting instructions prior to the end of their project. This report will capture both quantitative and qualitative outputs of the grant activities. The SDS will also request information regarding grant submissions/awards in August 2025 to capture the long-term impacts of this seed funding (see below).

EXTRAMURAL GRANT SUBMISSION REQUIREMENT

Awardees must produce a new proposal for extramural funding as part of the final report by the end of the project. In exceptional cases, where seed funding may prove the project non-competitive, a waiver of the extramural application requirement can be requested from the SDS. The PI (primary applicant) must submit a report to the SDS describing the extramural grant submission details by August 31, 2025.

Program Questions

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InfoReady Questions

Ana Laredo
Manager of Special Projects
Email: ana.laredo@utsa.edu

If this research proposal is funded, I agree that my acceptance obligates me to:

1. Maintain program eligibility throughout the award/performance period, including residence and employment with UTSA. If there is any change in employment or residency status, the PI (primary applicant) and/or their direct supervisor (department chair, school director, or dean) must notify Paul Rad at paul.rad@utsa.edu.
2. Include the following acknowledgment on all publications resulting from this grant award. PIs should also email Paul Rad at paul.rad@utsa.edu for any other acknowledgment requirements.

This project received funding, either in full or in part, from a collaborative seed grant provided by the 80/20 Foundation, Frost Bank Endowment, and Open Cloud Institute, and administered by the School of Data

3. If human subjects, animals, or biohazardous materials will be utilized in the research, protocols to the Institutional Review Board ([IRB](#)), Institutional Animal Care and Use Committee ([IACUC](#)), or Institutional Biosafety Committee ([IBC](#)) must be approved prior to funds being released.
4. Secure prior written approval from School of Data Science if the research to be conducted differs from that described in the proposal that was funded. Requests for such approval should be submitted to:
Email: paul.rad@utsa.edu
5. Submit at least one extramural proposal for funding to support the future progress of the project, within 6 months of the completion of the award period.
6. Adhere to the assigned PROGRAM TIMELINE and other program requirements as listed below:
 - **July 1, 2024** – Grant performance period begins (i.e., funds available)
 - **July 2024** - Present the initial plan at the SDS Summer Research Immersion Program
 - **October 2024** - Present interim findings at the 2nd Annual Los Datos Conference
 - **December 31, 2024** – Grant Performance Period Ends (Unspent funds swept)
 - **January 31, 2025** – Final project report due
 - Publications resulting from this collaborative seed funding should **acknowledge the support of SDS and OCI**.
7. Respond to all inquiries and communications from the Evaluation and Research Coordinating Center related to this funded project.
8. Have time to allocate to the project.

Principal Investigator (PI)	
Signature:	
Project Name:	

PI Supervisor - "I agree with the PI's obligation and responsibilities for this funding opportunity."	
Approved By:	
Signature:	
Date:	