Microsoft-Atlanta University Center Data Science Mini-Grant Program 2024

The [Atlanta University Center (AUC) Data Science Initiative](#) is committed to supporting innovations in data science across Historically Black Colleges and Universities (HBCUs). With support from Microsoft, the Data Science Mini-Grants (DSMG) Program seeks to promote research innovation at HBCUs that provides societal benefits or opportunities. The mini-grants are expected to support vertically integrated projects (VIP) that engage students and community members in the development of innovative research, experiential learning opportunities, and/or workforce opportunities.

About the Microsoft-Atlanta University Center Data Science Mini-Grant Program

With an investment from Microsoft, the AUC Data Science Initiative invites faculty and staff at Historically Black Colleges and Universities (HBCUs) to apply for a mini-grant to advance data science research and data science education research. The *Minority Serving Institutions*[1] report from the National Academy of Sciences (2018) calls for funding organizations to offer 'seed' or 'planning' grants to Minority Serving Institutions (MSIs) and to offer 'real-time guidance and collaboration.' The Microsoft-Atlanta University Center DSMG Program supports HBCU faculty or staff researchers who have not had recent funding support to enhance participation in and contributions to data science research and curriculum development.

The DSMG Program is particularly interested in supporting one-year virtually integrated projects (VIPs) that promote fundamental rights by developing innovations in data science that improve understanding of an issue and begin to develop solutions that provide societal benefits or opportunities. VIPs serve as an effective way to break down barriers between faculty and students, accelerate the pace of innovation, reduce inequities in undergraduate experiential learning, and better prepare students to function in the workforce through fundamental and transferable skill building.

Proposals should leverage VIPs to foster engagement and mentoring to advance new discoveries and innovations in data science. VIPs are expected to catalyze new innovations in transformative, hands-on approaches to developing data science techniques and applications by engaging students, faculty, and/or community members to collaborate on pilot, multidisciplinary projects that address real-world problems.

Proposals should promote novel, creative, and transformative VIPs that leverage data to address fundamental rights. Projects must seek to make contributions to a data science-related topic (i.e., AI, NLP, computer science, statistics, programming, etc.) and create learning and research experiences that allow students and/or faculty to gain deeper insight and make contributions to data science-related topics. Projects are designed to achieve a short-term, well-defined goal to enhance the quality of faculty participation in data science.

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[1] National Academies of Sciences, Engineering, and Medicine. 2019. *Minority Serving Institutions: America's Underutilized Resource for Strengthening the STEM Workforce*. Washington, DC: The National Academies Press. https://doi.org/10.17226/25257.

All proposals should address important challenges in data science. The DSMG Program has two tracks: *Track 1 Improving Data Science Education* and *Track 2 Advancing Data-driven Discovery*. The proposed work is expected to take place over one calendar year, make a significant institutional impact, and generate new knowledge in data science.

> **Track 1 Improving Data Science Education.** Projects are expected to develop data science and analytics-related education for either undergraduate students, graduate students, or the workforce. These data science education-focused projects may adopt, adapt, create, or improve curricular materials, curriculum design, or practices in ways that improve the learning and learning environments of data science.

> **Track 2 Advancing Data-driven Discovery.** Projects are expected to develop data science and analytics-related research. These data science research-focused proposals should address how the research will expand advances in data science and the potential for discovery across different disciplinary areas.

Professional Development Sessions. The AUC Data Science Initiative will help support the implementation of the project work via monthly (1-hour) virtual professional development sessions. The training will be required of all awardees and will be made available to the participation of other personnel at the proposing institution that supports the institution's research activities (e.g., sponsored research office, institutional assessment, and administration). A series of guest speakers will present on various training and professional development topics, including information regarding technologies to support activities; develop and execute project timelines and deliverables; develop assessment, including a logic model; dissemination strategies; budget management; stakeholder engagement; forming research partnerships; and other funding opportunities.

Site Visits. To support the developments and impacts of the proposed work, a member of the AUC Data Science Initiative leadership and the program coordinator will conduct a site visit to the institution to meet with the project team, institutional leadership, and the institution's broader community. The site visit will not be examination-based; rather, the site visit will be collaborative in nature to identify and seek solutions to any barriers in carrying out the project. The site visit should occur towards the end of the project time interval, including time incurred via no-cost extensions.

Podcast Dissemination. To support the dissemination of project findings, the AUC Data Science Initiative will feature awardees in a podcast series that will be shared in the public domain. The podcast will allow listeners/viewers to take a deep dive into how HBCUs are promoting fundamental rights by developing innovations in data science that improve understanding of an issue and begin to develop solutions that provide societal benefits or opportunities. The podcast will also serve as a tool to promote research, develop collaborations, and impart knowledge. The following goals will be used to guide the development and focus of this area.

Eligibility Information

- Eligible institutions that may submit a proposal only include Historically Black Colleges and Universities (HBCUs).
- The Lead Principal Investigator must be a full-time faculty or staff member at an HBCU.

- While there is no restriction on the number of submissions from each eligible institution, at most one award will be made to each eligible institution.

Award Information

Depending on the availability of funding, the DSMG Program will fund up to 10 one-year grants paid directly to eligible institutions in an award size of up to $18,000, with half of the award provided at the beginning of the project and the other half provided after completion and satisfactory review of the mid-year report. Preference will be given to those with little to no research funding.

Funding requests typically supported through other institutional resources or supported by other funding channels will not be considered. In the event the applicant is awarded institutional or other additional funding, the institutional or other additional funding is to be used prior to the awarded funding.

Additional Requirements

Those who accept the award agree to:

- Submit a mid-year report and a final report of results, which includes a summary of the project's budget expenditures and outcomes, including information on accomplishment, publications, curriculum material, and other specific deliverables and impacts.
- Participate in pre- and post-surveys.
- Participate in the monthly training sessions, which provide awardees support and access to opportunities.
- Participate in the site visit and the podcast interview.
- Share the project results in a forum, symposium, or other venues of dissemination.
- Report any future publications or future funding that benefits from the work in the award to the AUC Data Science Initiative.
- Include appropriate acknowledgment of Microsoft-Atlanta University Center Data Science Mini-Grants Program support in any publication (including World Wide Web pages) or any material based on or developed under the project, in the following terms:
  - "This material is based on work supported by the Microsoft-Atlanta University Center Data Science Mini-Grant Program."
- Orally acknowledge the Microsoft-Atlanta University Center Data Science Mini-Grant Program support using the language specified above during all news media interviews, including popular media such as radio, television, and news magazines.
- Make any data purchased available to the broader community, if possible.
- Posting of the public award title and abstract on the AUC Data Science Initiative webpage and other media and materials.
- Inform the Director of the AUC Data Science Initiative if additional funding supports the proposed work.

Due Dates

- The proposal deadline is Thursday, May 30, 2024. Awardees will be notified by August 15, 2024. The project start date should be September 1, 2024.

- The mid-year report is due on March 1, 2025, and the final report is due on September 30, 2025.

Proposal Preparation and Submission Instructions

To apply, input the following information here: https://www.surveymonkey.com/r/DSMGProgram

- **Cover Sheet -** Demographic information, including track and input in SurveyMonkey.
- **Abstract (250 words)** - Narrative overview of the proposed project for a non-specialist audience and suitable for general publication, such as the AUC Data Science Initiative website. Clearly state why the work is important in data science and what will be accomplished.
- **Proposal Description (6 pages max)** - Proposal descriptions must contain the following sections:
  1. **Proposing Principal Investigators:** The proposal must start with a table that has four columns: **(1)** Names of the principal investigators (up to 5); **(2)** Department(s) & Institution(s); and **(3)** Most Relevant Field(s) of Expertise.
  2. **Objectives and Significance of the Project:** Why is the project important? How will the work further data science-related research or curriculum development? What would the grant enable that isn't currently in place?
  3. **Plan and Methodology:** Describe a complete and well-thought-out plan for the project and all the activities. Clearly articulate how the project will advance the proposed team's research or teaching in data science.
  4. **Project Outcomes, Deliverables, and Timeline:** Clearly describe the planned outcomes and deliverables, along with milestones, that are attainable in the project timeline. Explain the steps needed to realize the project.
  5. **Anticipated Impacts:** Where do you see the grant having the most impact? How will the project impact the proposing institution in building its data science capacity? What are the anticipated impacts of the activities listed in the previous sections?
  6. **Dissemination Plan:** Discuss what will be shared and with whom.
  7. **Project Assessment:** Describe how the project will be assessed to determine the progress as well as the degree of success achieved. How do you assess the anticipated impacts? Why is there a high probability that the project will be achieved?
  8. **Sustainability Plan:** Describe plans for sustaining the project activities beyond the funding period, including institutionalization, should be addressed. Identify external funding to be pursued at a future date.
- **References Cited** - Format may vary according to the norms of the discipline.
- **Curriculum Vitae (3 pages max)** - Must be supplied for all principal investigators.
- **Budget (1 page max)** - Itemized statement of expected costs and a subtotal of these costs, along with a subtotal for the reassigned time if requested. Note that funds must be spent by the project end date.
- **Budget Justification (2 pages max)** - A narrative explanation of the budget where each cost should be listed, briefly described, and justified. Include why each item is needed, its purpose, and how the dollar total was determined.
- **Statement on Research Funding (1 page max)** - Describe any funding received by senior personnel in the past 5 years that supports research, including the project title, award amount, and funding source.

- **Letter of Support** - Include a letter of support from an appropriate administrator to provide evidence of institutional commitment and support for the project.

All uploaded documents will be PDF documents that are standard letter size documents (8 ½ by 11") with 1-in margin, with a font size of 11 points or larger (except for figures and tables).

Review Criteria

Proposals will be reviewed by the following criteria:

Objectives and Significance of the Project: The proposal specific its importance, how the work will further data science-related research or curriculum development, and what the grant enables that isn't currently in place. Vertically integrated projects (VIPs) will be given preference. Projects are encouraged to promote fundamental rights by developing innovations in data science that improve understanding of an issue and develop solutions that provide societal benefits or opportunities.

Plan and Methodology: The proposal conveys a complete and well-thought-out plan for the project and describes all the activities. The proposal clearly articulates how the project will advance the applicant's research or teaching in data science.

Project Outcomes, Deliverables, and Timeline: The proposal clearly states the planned outcomes and deliverables, along with milestones, that are attainable in the project timeline. The proposal explains the steps needed to realize the project.

Anticipated Impacts: The proposal clearly describes any anticipated scientific and societal impacts of the project, how the project will impact the proposing institution in building data science capacity, and the anticipated impacts of activities described in the section entitled 'Project Outcomes, Deliverables, and Timelines.'

Dissemination Plan: The proposal discusses what will be shared and with whom.

Project Assessment: The proposal describes how the project will be assessed to determine the progress as well as the degree of success achieved. The proposal explains why there is a high probability that the project will be achieved.

Sustainability Plan: Plans for sustaining the project activities beyond the funding period, including institutionalization, should be addressed. Proposals should identify external funding to be pursued at a future date.

Budget and Budget Description: Each item is justified, reasonable, and necessary to carry out the project activities.

Research Funding: Preference will be given to those with little to no research funding.