Purpose

The Constance and Martin Silver Center on Data Science and Social Equity (C+M Silver Center) at the Silver School of Social Work requests applications for research studies.

The C+M Silver Center supports a competition related to data science and allied new and emerging data science-related technologies and approaches to achieve timely and large-scale impact on today’s most challenging social problems such as health inequity, racial/ethnic disparities in mental and physical health, substance use problems, teen pregnancy, engagement in treatment, treatment planning, suicide prevention, violence perpetration, medication adherence, STI/HIV risk, optimal parenting in low socio-economic and under resourced environments, child maltreatment, child neglect, or child welfare system involvement.

This competition will support the early development of creative, high-impact strategies that:

- leverage data science and allied technological approaches to stimulate innovation in behavioral/social science research;
- show the promise of large-scale social impact in driving down the most complex problems society faces, such as hazardous substance use, suicide, or violence perpetration;
- draw from the latest science and promise to advance the field scientifically by developing model evidence-supported strategies that can be scaled or emulated elsewhere; and/or
- demonstrate the likelihood of attracting additional funding (from the private sector, government, or foundations) to accelerate, fuel, and widen impact and influence.

Harnessing big data for social good is one of the Grand Challenges for Social Work.

Developing products for the marketplace. The C+M Silver Center also has a strong interest in using research findings in data science to develop mHealth and other technology-based products and bring them to the market for social equity. In fact, NYU fosters a University-wide startup ecosystem that encourages multi-disciplinary collaboration, accelerates innovation, and cultivates
the next generation of startup leaders. Applicants can consider how their study will directly create or inform such products and may use these resources for support and inspiration.

Data science is an interdisciplinary field that uses scientific methods, processes, algorithms, and systems to extract knowledge and insights from structured and unstructured data and applies knowledge and insights from these data. In particular, data science focuses on problems and techniques unique to digital data. Data science supports data-driven decisions to predict, understand, and address social issues.

The C+M Silver Center is designed to stimulate interest in and support early development of innovations in the field of data science broadly, including specific domains such as:

- Constructing predictive models using complex data, including
  - Data systems such as “big data” (large, unstructured collections of data high in volume, variety, or velocity)
  - Data visualization
  - Efficient processing of unstructured data

- Developing and applying analytic methods, including
  - Artificial intelligence (including an anti-racist and equitable approach to A.I., queer A.I., “emancipatory A.I.”)
  - Deep learning (neural networks, etc.)
  - Machine learning and other predictive modeling (including identifying and ameliorating racial bias in machine learning algorithms)
  - Machine perception and sensing
  - Natural language processing

- Data applications, including
  - Translational data science
  - Geospatial computation

- Special topics in data science, including
  - The ethics of data science
  - Data science with human service populations
  - Integration of data science with digital technologies
  - Development of data-driven apps to address significant social problems

The C+M Silver Center is positioned to assist you with refining research questions and making connections with faculty and researchers at NYU and the larger community who are expert in aspects of data science and who may serve as collaborators on the project. Please reach out to the Center Director (Marya Gwadz) and Director of Operations (Amanda Ritchie) as needed. The NYU Scholars site can provide links to faculty and researchers at NYU working in data science-related domains. The Center for Practice and Research at the Intersection of Information, Society, and Methodology (PRIISM) at Steinhardt and the NYU Center for Data Science may yield potential collaborators.

**Funding levels:**

- Pilot/early stage: $30,000 maximum
- Developmental (but not at the earliest stage of development): $60,000 maximum
Course release: Faculty may request a course release as part of the application. The course release is dependent on available funds and the number of awards made. The course release, if granted, must be used in the spring or fall semester following the award, and cannot otherwise be banked or carried over.

Allowable expenditures. Funds for most aspects of research are allowed, including funding study personnel (research assistants, research associates, statisticians), compensating consultants, participant compensation, purchasing data sets and related tools, open access journal fees, travel to conferences on data science-related topics, and sponsoring working meetings or workshops on data science-related topics. However, the award is not intended for standard upgrades of office computer equipment, standard/basic software packages that Silver will provide, or coverage of faculty salaries, including faculty summer salaries. (If you wish to seek an exemption to this policy; for example, for coverage of a Co-I faculty statistician’s summer salary, you can make that request.) NYU has a supercomputer that all can use. The intent of this program is to help jumpstart a new area of research for faculty, and/or provide preliminary data for a future research study that has a high probability of extramural funding and/or that has the potential to make a significant impact on society. All expenses must adhere to NYU Silver and University policies. A no-cost extension of up to one year is possible upon request.

Notes on eligibility. The Center Director(s) and the future holder of the endowed professorship in data science are not eligible to apply for this RFP. OFR Advisory Committee, Center Launch Committee, and other OFR and Center advisory group members are eligible to apply if they are also Silver full-time faculty.

Reapplications. This RFP allows faculty who applied previously but were not funded to re-apply with a revised application. Revised applications should include a one-page summary of changes made to the proposal in response to the previous review.

Review process and criteria. The proposals will be reviewed by a research advisory committee and the Office of the Associate Dean for Research in the SSSW. The review process will be similar to the NIH (independent peer review by at least 3 reviewers, a group discussion among reviewers and final scores, followed by a decision made by the office of the Associate Dean for Research and the Dean based on scores). Faculty will receive feedback on their applications.

The email of intent should provide name of the applicant, the title of the project, and a short abstract or bullet-point list summarizing the project. The email of intent allows us to plan for the review of applications. **You will not receive feedback on the email of intent.**

The full applications should: use the following format: 0.5” margins, single spacing, Arial 11 font, be sent as a single document (PDF), and include the following sections:

- The name of the Principal Investigator at Silver (i.e., the Silver faculty member)
- A project title
- A short abstract summarizing the project (maximum of 30 lines)
- The PI’s bio sketch in the NIH format (if you do not have a bio in this format, let Marya Gwadz know and we will help you). The most recent NIH bio sketch format is preferred.
- A list of study Co-Investigators (if any) and their bio sketches in any format. (We encourage the inclusion of a Co-I or consultant in the field of data science.) Bio sketches in the most recent NIH format are preferred.
- A line-item budget and brief written justification of each item
The study's stage (Pilot/early stage or Developmental)
One-page introduction to the revised proposal (if appropriate)
A project timeline, identifying major milestones and deliverables
Course release request (yes/no, if yes, which course, which semester)
The Research Strategy; in 5 pages, a description of:
  o The significance of the project
  o The specific aims of the project
  o The innovations in the project
  o The approach (methods) of the project
Supporting details; namely, in 3 pages, a description of:
  o Structure of the research team and roles
  o How this study aligns with the intent of this program (1 short paragraph)
  o Potential Human Subjects issues that might arise in this study and how they will be monitored and addressed including responsible data use and social impact (1 paragraph)
  o Outcomes the project will achieve by the end of funding, including potential for extramural funding
  o Possible implications for mHealth or tech products (1 short paragraph including alignment with the NYU startup environment if applicable)

The criteria on which the full proposals will be judged include the significance of the project, innovation of the project, approach (i.e., methods and design), relevance to data science, and potential for leading to future research.

We recommend that you meet with Pauline Lee or Maria Ponce in the OFR to develop your budget.

Please reach out to Marya Gwadz, the Associate Dean for Research, with any questions you may have (mg2890@nyu.edu). Dr. Gwadz, Dr. Cleland and Ms. Ritchie are available to meet with faculty to discuss research ideas and potential applications of data science to these ideas.

If an award is made, faculty are required to obtain IRB approval prior to beginning the study. A brief final report will be due to the SSSW Office for Research within 90 days of project completion.

Submit letters of intent and applications to silver.ofr@nyu.edu and note “CMS Data Science RFP” in the subject line.