Funding Opportunities: Artificial Intelligence Research at NIH

Lewis-Burke Associates LLC – April 13, 2021

This week the National Institutes of Health (NIH) announced a set of opportunities related to artificial intelligence (AI) and machine learning (ML) in the context of biomedical research. One opportunity is currently accepting proposals, and the others will open in June 2021.

**Coming Soon: Opportunities through the Bridge to Artificial Intelligence (Bridge2AI) Program**

NIH has released two Notices of Intent to Publish previewing upcoming funding opportunities through the new Common Fund program, Bridge to Artificial Intelligence (Bridge2AI). Bridge2AI, initially referred to by NIH as Artificial Intelligence for Biomedical Excellence (AIBLE), aims to promote the widespread adoption of artificial intelligence (AI) and machine learning (ML) in biomedical research. The overall goal of the program is to “generate flagship datasets and best practices for the collection and preparation of AI/ML-ready data to address biomedical and behavioral research grand challenges.” The Bridge2AI program aims to generate:

1) “New biomedical and behavioral datasets, that are ethically sourced, trustworthy, well-defined and accessible;
2) Software to standardize data attributes across multiple data sources and across data types (establishing new standards as needed);
3) Automated tools to assist the creation of FAIR and ethically sourced datasets (e.g.: through the intelligent workflows, sensorized instruments, etc.);
4) Resources to disseminate data, ethical principles, tools and best practices; and
5) Cross-training materials and activities for workforce development that bridges the AI/ML and biomedical/behavioral research communities.”

NIH plans to publish full solicitations in June 2021 for the first two components of Bridge2AI:

**Data Generation Projects of the NIH Bridge to Artificial Intelligence (Bridge2AI) Program:** NIH will use Other Transaction Authority (OTA) to fund multidisciplinary data generation projects, which will produce the flagship datasets at the heart of Bridge2AI. Each project will be centered around a biomedical and/or behavioral research “grand challenge,” and will be expected to produce multiscale, multimodal, and multi-stream datasets that can be used in AI/ML analyses. Several examples of potential “grand challenges” that could be addressed through these awards are included in the Notice of Intent to Publish. Project teams should include participants from multiple scientific domains and diverse social, cultural, economic, academic, and industrial backgrounds and communities.

**NIH Bridge2AI Integration, Dissemination, and Evaluation (BRIDGE) Center:** NIH will use the U54 Cooperative Agreement mechanism to fund a BRIDGE Center to coordinate and integrate activities across the Data Generation Projects, including disseminating products, best practices, and skills and workforce development materials, as well as evaluating all aspects of the Bridge2AI program. The Center will be structured as a series of Cores – one Administrative and five Scientific – that will work together and with other components of Bridge2AI. The planned Scientific Cores focus on Teaming;
Ethics; Standards; Tool Optimization and Dissemination; and Skills and Workforce Development. Applicants must propose creating an Administrative Core and at least one of these Scientific Cores to be considered for funding. Each proposed Core will be individually reviewed, and the BRIDGE Center may be assembled of Cores from different institutions.

Publication: NIH anticipates releasing the full solicitations for both of the above opportunities on June 11, 2021.

Deadline: The first anticipated application due date will be in August 2021. Potential applicants for the Data Generation Projects will be required to participate in NIH-facilitated teaming activities in summer 2021 as part of the application process. Information on these teaming activities will be published on NIH’s Bridge2AI website in the coming months.

Award Information: The earliest anticipated award date will be in March 2022. At this time, the estimated funding total for the program, the number of awards to be made, and the size of each award are all to be determined.

Eligibility: All institutions of higher education, non-profits, for-profit organizations, state and local governments, and Indian/Native American Tribally Designated Organizations will be eligible to apply.

Sources and Additional Information:
- More information about the NIH Bridge2AI program is available at https://commonfund.nih.gov/bridge2ai.

Open Now: Administrative Supplements for AI/ML Workforce Development

The Office of Data Science Strategy (ODSS) at NIH, in partnership with fourteen Institutes and Centers (ICs), released a Notice of Special Interest announcing the availability of Administrative Supplements for Workforce Development at the Interface of Information Sciences, Artificial Intelligence and Machine Learning (AI/ML), and Biomedical Sciences. The aim of this program is to fund the development and implementation of academic curricula (i.e., exportable training modules and integrated training plans) or training activities (i.e., events or other educational experiences where the structure and output are shared) at the interface of information science, AI/ML, and biomedical sciences. The ultimate goal of these supplements is to equip scientists with expertise in making biomedical data Findable, Accessible, Interoperable, and Reusable (FAIR) and AI/ML-ready. Activities supported by these supplements should be made available to the broadest possible audience, including researchers at different career stages and from different backgrounds, at no cost to the user.

Award Information: Application budgets are limited to $80,000 in direct costs (plus applicable F&A costs), and requests may only be made for one year of support.
Eligibility: Each participating IC has issued specific eligibility criteria for these supplements. In general, parent awards eligible for supplemental funding are institutional training grants (e.g. T32 awards) or research education program (e.g. R25) awards.

Deadline: Applications are due May 14, 2021.

Sources and Additional Information:
- The Notice of Special Interest for this program is available at https://grants.nih.gov/grants/guide/notice-files/NOT-OD-21-079.html.