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# Request for Information (RFI) on an Implementation Plan for a National Artificial Intelligence Research Resource: Responses

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**Office of the Vice Chancellor  
for Research**

October 1, 2021

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Re: *RFI Response: National AI Research Resource*

In response to the expanding interest and opportunities to develop artificial intelligence, we support the creation of the National Artificial Intelligence Research Resource Task Force. There is enormous need for infrastructure to expand access, advance collaborations, provide training, improve equity in access and development, and to prioritize standards and practices which respect the privacy and autonomy of subjects. Per the instructions, we have compiled answers and additional considerations for the team sorted by the question numbers below. We hope that this feedback will assist in the development and planning for the Task Force.

**1. *What options should the Task Force consider for any of roadmap elements A through I above, and why?***

- *It will be critical to ensure equitable access to resources. A current limitation for many interested in AI research is access to standard resources and computing power. To disrupt consolidation of knowledge and capacity, specific attention, policy, and planning will be required to facilitate open licensing for educational use and inclusive groups who do not already have such infrastructure. We recommend the inclusion of advocacy groups such as SPARC (<https://sparcopen.org/>) with missions that focus on advancing open knowledge and that have extensive experience in development and consideration of equity by design solutions.*
- *Broad federal agency partnership and representation will be part of developing governance (B). We especially recommend the inclusion of the Institute of Museum and Library Services – which has been funding the development of practices, preservation standards and assessment of reuse for artificial intelligence projects. Academic and public libraries will continue to be outreach and educational leaders for the NAIRR and can provide access to the resources across a span of disciplines and communities. The FTC, recently funded for greater engagement with technology and privacy, will be another critical leader for developing governance and accountability.*

- *Beyond federal agencies, other governance partnerships should be considered at the state and international level (B). Artificial intelligence programs, resource use and impact will arise at both more local and global levels. Care will be needed to ensure that resources developed by NAIRR are compliant with requirements such as GDPR and other international laws governing use of AI and individuals' information.*
- *A final consideration related to governance (B(ii)) will be developing and enforcing consequences and a plan for documented and ongoing oversight for public and private sector researchers using these resources. A plan will be needed to provide accountability and transparency related to the impact of the artificial intelligence work.*

**2. Which capabilities and services (see, for example, item D above) provided through the NAIRR should be prioritized?**

- *In addition to the capabilities detailed in D, another priority should be the development of a standard reporting methodology and required description for data sets and projects. Especially for datasets provided for training algorithms, standardization will be essential to begin to identify the limitations of what the AI has been trained upon, where revision and reassessment is likely to be needed, and where the ability to predict future outcomes is more likely to be inaccurate. This follows best practices in other scientific fields where standardized reporting structures for measurements have long been used to allow appropriate comparison, testing veracity and identifying limits of reproducibility and reusability. These standards should be compiled with an international community to create resources which can be used beyond national borders to meet global challenges.*

**3. How can the NAIRR and its components reinforce principles of ethical and responsible research and development of AI, such as those concerning issues of racial and gender equity, fairness, bias, civil rights, transparency, and accountability?**

- *As we develop this resource, it is important to avoid the idea that artificial intelligence is a panacea for complicated problems of public and clinical health, criminal justice and overcoming historical and current discriminatory practices. AI researchers, educators, companies and others should consider and document potential downstream reuse and the harms that may result from implementing artificial intelligence solutions. There must be mechanisms and support for researchers and the NAIRR Task Force to identify where AI is not an appropriate solution.*

- *Part of reinforcing these principles includes developing and enhancing foundational training. It also requires explicit consideration and documentation of harm. Ethical engagement and issues of privacy should remain consistently addressed through training programs and centered and valued in both fundamental and continuing education.*
- *Further, NAIRR should engage with communities whose data may be impacted in a way that conflicts with their personal and community data autonomy. Training and documentation should consider both individual and community level harm by these artificial intelligence projects. While we have seen some preliminary standards such as the CARE Principles for Indigenous Data Governance (<https://datascience.codata.org/articles/10.5334/dsj-2020-043/>), further standard and education development should recognize any disparate impacts of artificial intelligence across communities and individuals.*
- *In addition to improving the foundational and advanced training requirements, as we continue to presently rely on extant datasets, we must acknowledge biases in data capture. Improved and documented transparency surrounding bias in datasets is critical to disrupt perpetuation of ongoing harm.*

**4. What building blocks already exist for the NAIRR, in terms of government, academic, or private-sector activities, resources, and services?**

- *Among the resources already available is extensive funded research that has identified the discrepancies between the hypotheses and actual capabilities of artificial intelligence. This research has also identified privacy and other harmful impacts. NAIRR should identify and engage with the experts who have provided decades of research and call upon their knowledge as a fundamental building block of the program. Some potential researchers include Dr. Safiya Noble, Cathy O'Neil, Dr. Casey Fiesler, and Professor David Hoffman.*
- *The healthcare industry is an example where algorithms have been frequently used to guide healthcare provision and to determine decisions for reimbursement purposes. This existing format can be mined both for what has served patients well but also to identify where a focus on profit and shareholder value has introduced individual and community harms which must be addressed before artificial intelligence should be adopted in other disciplines. There are similar examples of current tools showing both benefits and harms in other disciplines like criminal justice, banking, real estate and education.*

5. *What role should public-private partnerships play in the NAIRR? What exemplars could be used as a model?*

- *Public-private partnerships should be a critical part of the NAIRR, but the emphasis should focus on community benefit for those whose data is captured and used. A current partnership model is healthcare, where the majority of insurance and hospitals are private. Care should be taken to identify best practices of public-private partnerships and prevent harms. Existing standards from healthcare may serve as mechanisms to start collaborative public-private partnerships.*
- *As part of the development of these partnerships, there is a need for transparency about potential biases to develop community trust, particularly with historically and currently underrepresented, underserved, and over-surveilled communities. Prior experience will have led many of these communities to mistrust private participation. A transparent and accountable process will be necessary to develop trust and collaboration.*
- *In addition to considerations about community trust, there are considerations of the goal of optimization for AI algorithms and projects. Projects are frequently optimized either for equity or for financial performance, occasionally both. As public-private partnerships are considered, the key principles of equity must be foregrounded by NAIRR to prevent a singular focus on the extraction of intellectual property in pursuit of profit.*

6. *Where do you see limitations in the ability of the NAIRR to democratize access to AI R&D? And how could these limitations be overcome?*

- *There are limitations in terms of funding, accountability, historical data accuracy and individual and community mistrust due to the past and current disparities in algorithmic impact and benefit. There are few laws that protect individuals or communities from the short- and long-term harms of artificial intelligence and enormous potential for increased redlining. There is the threat of replication and perpetuation of disparate practices based on race, gender, sexuality, income, health status, and other forms of bias. Specific laws and federal policies that improve transparency and accountability and prevent harm are likely to be needed.*
- *An additional significant challenge is limited workforce opportunities in the public sector. For example, in healthcare, there are few jobs available to focus on ethical AI healthcare development and those that are available offer fewer resources and lower salaries than the private sector. This*

*restricts the number and type of projects undertaken and the speed to develop them. In the interim, for-profit endeavors proceed without oversight over the use of historically biased datasets. To address this, targeted federal funding should be made available to promote and sustain a workforce beyond private sources.*

- *Artificial intelligence is not solely a consideration of the United States, and as we consider the development of standards, training, datasets and access one consideration should be addressing potential foreign influence. The United States has an opportunity to engage globally in order to ensure that AI tools are able to serve not only our citizens but our national partners in order to meet grand global challenges.*

Sincerely,

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