

Federal Register Notice 86 FR 46278, <https://www.federalregister.gov/documents/2021/08/18/2021-17737/request-for-information-rfi-on-an-implementation-plan-for-a-national-artificial-intelligence>, October 1, 2021.

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

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**Subject:** RFI Response: National AI Research Resource  
**Date:** Friday, September 3, 2021 5:06:28 PM

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To whom it may concern,

I write to offer my thoughts on the Implementation Plan for a National Artificial Intelligence Research Resource. I am concerned that this effort will place very little emphasis on mechanism-based models, and will continue to emphasize data-driven, statistical models--a trend seen throughout federal funding programs. In particular, this is an enormous problem in the medical sciences and I think it is a cause for concern. In the biomedical world, artificial intelligence relies on properties of large groups of people that hide characteristics of the individual patient — this is especially problematic for diseases that manifest themselves so differently from person to person. Without a sound mathematical theory built on the underlying physics, chemistry, and biology, it is very difficult to understand the phenomena under investigation at a deep level--and this places fundamental limitations on how to guide interventions (for example, how to treat a cancer patient; see, for example, <https://thehill.com/opinion/healthcare/463656-what-if-we-had-a-mathematical-equation-for-cancer?rl=1>).

Thus, I would simply suggest (really, beg) that the Task Force consider including mechanism-based modeling as part of this effort.

Thank you for your time and I hope you and yours are happy, healthy, and vaccinated. :)

Sincerely,

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