



**The National Science Foundation's (NSF)
National Center for Science and Engineering Statistics (NCSES)**

Request for Solutions (RFS)

RFS Title: Measuring Large Language Model Understanding of Federal Statistical Data

RFS Identifier: MLMU-25

RFS Issue Date: June 27, 2025

Full Proposal Due Date: July 18, 2025, 5 PM ET

1. Introduction

1.1 Background

The National Center for Science and Engineering Statistics (NCSES), a federal statistical agency in the U.S. National Science Foundation (NSF), legislatively mandated in the National Science Foundation Act of 1950 (42 U.S.C. 1862 (a) (6)) to serve as a central federal clearinghouse for the collection, interpretation, analysis, and dissemination of objective data on science, engineering, technology, and research and development and to provide a source of information for policy formulation by other agencies of the federal government.

NCSES is one of 16 Recognized Statistical Agencies and Units (RSAUs) recognized by the Office of Management and Budget (OMB). NCSES provides objective information on the U.S. S&E enterprise in a global context. It serves a vital role in the collection, interpretation, and analysis of S&E data with respect to research and development (R&D), the workforce, U.S. competitiveness in science and technology (S&T), and educational attainment in the STEM fields.

1.2 Purpose

The purpose of this Request for Solution (RFS) is to develop an empirical evaluation that measures the ability of large language models (LLMs) to accurately respond to questions that require an understanding of federal statistical open Government data assets and their associated metadata.¹ This will involve the creation of prompt-response pairs necessary to assess the accuracy, relevancy, and explainability of LLMs in federal statistical use cases. In addition, this effort will result in a tool that will evaluate LLM performance in response to these evaluation prompts, while also providing insight into how well federal statistical data assets are structured to support LLM interaction – highlighting opportunities to improve metadata quality, accessibility, and machine-readability. See Attachment 1 - Project Topic for more details.

This project supports the National Secure Data Service Demonstration (NSDS-D) project, authorized under the 2022 CHIPS and Science Act to inform a governmentwide effort on strengthening data linkage and data access infrastructure. To find out more about this initiative, please visit <https://ncses.nsf.gov/initiatives/national-secure-data-service-demo>.

2. Instructions

The government reserves the right to select for award any, all, some, or none of the proposals received in response to this announcement. This RFS is an expression of interest only and does not commit the government to pay any proposal preparation costs.

ADC's Consortium Management Firm (CMF), Advanced Technology International, will receive responses to this RFS and conduct a preliminary screening of submitted full proposals to ensure compliance with the RFS requirements. As part of the preliminary screening process,

¹ Open government data assets are defined in statute (44 USC 3502(20)) and in [M-25-05](#). Solutions should consider both datasets and their accompanying contextual information (e.g., metadata, documentation, and formatting) as this information can influence how an LLM interprets the dataset.

submissions that do not meet the requirements of the RFS may be eliminated or additional information may be requested to complete a satisfactory screening. The CMF will notify offerors of the government's selection decision and make the resulting project award(s).

Additionally, the government may engage non-government Subject Matter Experts (SMEs) to support the government's evaluation of submitted proposal(s) and to produce expert input throughout the execution of an award. The SME(s) will be subject to a Confidentiality clause to protect Proprietary Information. The Offeror's submission of a proposal in response to this RFS indicates concurrence with the aforementioned use of SME(s).

2.1 Schedule

The full proposal submission deadline is included on the cover page of the RFS. Final decisions on awards are expected in July 2025. Awarded projects will be expected to commence in August 2025. The estimated period of performance for proposed efforts is 11 months and must conclude no later than August 9, 2026. For projects requiring data access or other preparatory steps before the primary research activities can begin, offerors are encouraged to allow time for this prior to official kick-off. If applicable, the timeline should account for data collection approval by the Office of Management and Budget under the Paperwork Reduction Act, including the time required for public comment.

This RFS and amendments issued thereto will be posted on the ADC website at <https://www.americasdatahub.org/>. It is the responsibility of the offeror and interested parties to be aware of RFS amendments by regularly checking the ADC website.

2.2 Offeror Eligibility

This solicitation is unrestricted. All qualified offerors, including universities, may submit a response. If selected for award, the offeror must join ADC if not already a member.

2.3 Project Funding

Funding for this program as appropriated in the federal budget for projects determined by the government to be technically consistent with the objectives of this RFS and of interest to the government. The government reserves the right to expand the award amount to allow for projects with exceptional merit.

It is anticipated there will be one award.

Awards resulting from this RFS will be made based on the evaluation results. Awards are subject to the availability of funds. The government reserves the right to fund all, some, one, or none of the proposals submitted; may elect to fund only part of a submitted proposal; and may incrementally fund any or all awards under this RFS. Full proposals submitted in response to this RFS that are not initially awarded may be awarded up to 12-months after the full proposal deadline.

2.4 Project Selection Process

This RFS selection process is structured as a one-step process.

Offerors are invited to submit a detailed technical and cost proposal for evaluation. Proposals shall be prepared in accordance with instructions in Attachment 2.

Proposals must be submitted to the ADC CMF in **Microsoft Word** using the online form here: https://atisc.formstack.com/forms/adc_rfs_mlm_u_25

2.5 Intellectual Property Rights

Awards will generally contain detailed provisions concerning patent rights, rights in technical data and computer software, data reporting requirements, and other terms and conditions which may be negotiated as part of the award process.

Offerors must describe any limitations on any intellectual property (patents, inventions, trade secrets, copyrights, or trademarks) that will impact the offeror's performance of the contract or impact the government's subsequent use of any deliverable under the contract. The offeror must describe the intellectual property in sufficient detail to describe limitations (such as a declaration of data rights of the offeror or any subcontractor and potential patent licenses required by the government, etc.), and to describe why or how the government can accomplish the stated objectives of this RFS with the limitations described or proposed by the offeror.

2.5.1 Proprietary Data Restrictions

Offerors are advised that proposals may contain data the offeror does not want disclosed to the public for any purpose or used by the ADC CMF or the government except for evaluation purposes. If the offeror wishes to restrict such data, the cover page of all submittal documents must be marked with the following legend, and relevant sheets marked as instructed.

This proposal includes data that shall not be disclosed outside the ADC CMF and the government and shall not be duplicated, used, or disclosed – in whole or in part – for any purpose other than to evaluate this proposal. However, if a contract is awarded to this offeror as a result of – or in connection with – the submission of these data, the government shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting contract. This restriction does not limit the government's right to use information contained in these data if they are obtained from another source without restriction. The data subject to this restriction are contained in Sheets [insert numbers or other identification of sheets].

Each restricted data sheet shall be marked as follows:

Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this document.

To the extent that such restrictions on proprietary data or information would not interfere with the intent of the government to make the results of the work and projects awarded under the RFS available to all interested parties, and if in conformance with the Freedom of Information Act (5 U.S.C. 552, as amended), the government will honor those desires.

2.6 Other Award Information

It is anticipated that any award will be issued under the ADC Other Arrangement Base Agreement, which can be found on the ADC website. By submitting a proposal in response to this RFS the offeror is agreeing in full to the terms and conditions of the ADC Other Arrangement Base Agreement.

The anticipated award will incorporate and require compliance with Article XI of the ADC Other Arrangement Base Agreement as an attachment, as the effort will require access to statistical data that is protected by the Confidential Information Protection and Statistical Efficiency Act (CIPSEA) of 2018.

2.7 Agreement Type

It is anticipated the proposed efforts will be funded as firm-fixed-price. However, offerors may recommend an alternate expenditure-based approach (e.g., cost, cost-plus-fixed-fee, etc.) and include the rationale for their use. Unless explicitly identified in the RFS, no other agreement types will be considered for award. Final agreement type will be subject to mutual agreement between selected offeror and the government.

3. Evaluation and Award

3.1 Full Proposal Evaluations and Ratings

All compliant submissions will be evaluated based on the following criteria which are listed in order of importance: (1) Technical Approach, (2) Teaming, and (3) Cost. Details regarding the evaluation factors and ratings are below.

3.1.1 Technical Approach

3.1.1.1 Technical Approach Evaluation

In accordance with Attachment 2, offerors shall address the below evaluation factors in the Proposed Approach section of their Executive Summary. **The assigned evaluator will evaluate the degree to which the proposed project accomplishes each of the following:**

- i. meets the project objectives outlined in Attachment 1 (25%)
- ii. will result in a product, tool, or framework that can be applied to promote advancements in in data discovery, access, linkage, and analysis (25%)
- iii. demonstrates an innovative approach to meeting the project objectives (30%)
- iv. demonstrates an understanding of how the project informs the development of a National Secure Data Service (20%)

3.1.1.2 Technical Approach Rating

The evaluators will assess the technical approach on the above criteria, note key strengths and weaknesses, and assign an overall rating of Outstanding, Good, or Poor to the Technical Approach.

- Outstanding: The solution meets requirements and indicates an exceptional approach and understanding of the requirements. Strengths far outweigh weaknesses. The risk of unsuccessful performance is low.
- Good: The solution meets requirements and indicates an adequate approach and understanding of the requirements. Strengths and weaknesses are offsetting, or weaknesses will have little or no impact on contract performance. The risk of unsuccessful performance is no worse than moderate.
- Poor: The solution does not meet requirements and/or contains multiple weaknesses and/or one or more deficiencies. The risk of unsuccessful performance is high. The solution is not awardable.

3.1.2 Teaming

3.1.2.1 Teaming Evaluation

In accordance with Attachment 2, offerors shall address Teaming and use of non-traditional entities. The assigned evaluator will evaluate the degree to which the proposed project includes a diversified team of qualified performers to include use of non-traditional entities. A “non-traditional entity” means an entity (construed in its broadest sense to include qualified large and small businesses, universities, non-profits, philanthropic organizations, partnerships, joint ventures, and other entity forms) that is not currently performing and has not performed, for at least the three-year period preceding the solicitation of sources by NSF for the procurement or arrangement, under any NSF procurement contract or NSF instrument of financial assistance.

3.1.2.2 Teaming Rating

The evaluation team will analyze each proposed technical team based on the criteria outlined above. A concise summary will be provided, noting key strengths and weaknesses. Each technical approach will receive an overall rating of Outstanding, Good, or Poor.

- Outstanding: The resumes show that the team is diversified and highly qualified to successfully conduct the proposed project or research. The experienced team includes the use of non-traditional entities. The proposal designates team organization and management structure and specify the main point of contact for the NCSES. The risk of unsuccessful performance is low.
- Good: The resumes show that the team is capable but may not be diversified or include the use of non-traditional entities. The risk of unsuccessful performance is no worse than moderate.
- Poor: The risk of unsuccessful performance is high due to an inexperienced team, lack of adequate management structure, or because resumes of key personnel were not provided.

3.1.3 Cost

The CMF will perform an analysis of the submitted cost proposal and will provide the results to the government. This effort may entail the CMF requesting additional information from the offeror. The government will determine whether the offeror's total evaluated cost/price is fair and reasonable.

3.2 Notifications and Negotiations

All offerors will receive written notification of the final disposition of their proposal. If selected for award, the CMF will contact the offeror(s) with further instructions.

4. Communication

Any questions related to this RFS should be submitted to the ADC CMF in writing at ADC-Contracts@ati.org by July 2, 2025.