

March 15, 2025

Faisal D'Souza, Technical Coordinator Networking and Information Technology Research and Development (NITRD) National Coordination Office (NCO)

Re: Document No. 2025-02305

Dear Mr. D'Souza:

The Open Source Initiative (OSI) appreciates the opportunity to provide input on the development of an Artificial Intelligence (AI) Action Plan. OSI is a nonprofit organization created in 1998 to steward the <u>Open Source Definition</u>. The definition serves as a foundation to maintain the fundamental freedoms of Open Source on which the modern software ecosystem is built. Our community represents a wide range of stakeholders — from industry and academia to startups and foundations — all working to promote the benefits of Open Source Software and connect practitioners to policymakers. We believe Open Source can both strengthen security and unleash innovation by ensuring the brightest minds can work together, free of barriers. Most recently, OSI undertook the co-development of an <u>Open Source AI Definition</u> (OSAID), recognizing the need for clarity around what it means for an AI system to be truly Open Source. We are pleased to contribute to the AI Action Plan to ensure the innovations made possible by Open Source can be leveraged to increase U.S. competitiveness and national security.

The Strengths of Open Source

Open Source Software underpins almost every aspect of technology we use. Recent reports have found that 97 percent of applications contain Open Source Code¹ and

¹ Black Duck's "Open Source Security and Risk Analysis" (OSSRA) report found at: <u>https://www.blackduck.com/resources/analyst-reports/open-source-security-risk-analysis/thankyou.html#U</u> <u>Xoverview</u>

90 percent of companies use Open Source in some way.² Open Source became ubiquitous because developers, researchers, and business leaders recognized that open collaboration is needed to scale the benefits of technological innovation, including the Internet, because it leads to higher quality, better reliability, greater flexibility, and lower costs. Today, U.S. federal agencies have also recognized the immense benefits of Open Source Software, incorporating its use into critical infrastructure, including at the Department of Defense and research conducted by the National Science Foundation.³⁴

The <u>Open Source Definition</u> that OSI maintains for the community removes barriers to learning, using, sharing, and improving software systems. The core criteria of the Open Source Definition have given innovators the freedom to build and deploy new technologies faster than ever before while maintaining flexibility and control in the development process.

For example, Open Source is critical in key aspects of software development such as security, cost, and time. When code is Open Source, more developers are able to review and identify security vulnerabilities in a software program and then fix them — often in less time and at a lower cost than if only a few developers had access to the code. Many efforts, such as GitHub's Secure Open Source Fund,⁵ aim to make Open Source even more secure through investments in training and collaborations across the software community. Further, researchers have **not** found evidence that models with open weights are any more vulnerable to cybersecurity threats or misuse than closed software.⁶

² Github's 2022 Octoverse Report found at: <u>https://octoverse.github.com/2022/</u>

³ "DoD Open Source Software FAQ", Office of the DoD CIO, dated 2021-10-28, found at: <u>https://dodcio.defense.gov/open-source-software-faq/#frequently-asked-questions-regarding-opensource-software-oss-and-the-department-of-defense-dod</u>

⁴ "NSF invests over \$26 million in open-source projects" found at: <u>https://www.nsf.gov/funding/initiatives/pathways-enable-open-source-ecosystems/updates/nsf-invests-ove</u> <u>r-26m-open-source-projects</u>

⁵ See OSI's blog, "Improving Open Source security with the new GitHub Secure Open Source Fund" at: <u>https://opensource.org/blog/improving-open-source-security-with-the-new-github-secure-open-source-fun</u> <u>d</u>

⁶ Kapoor, Sayash, et al. "On the societal impact of open foundation models." *arXiv preprint* <u>*arXiv:2403.07918*</u> (2024).

The freedoms of the Open Source Definition that built the Internet will be imperative to maintain America's technological competitiveness in the age of AI and beyond.

The Open Source AI Definition

In 2022, OSI realized that the traditional definition of Open Source was not sufficient when applied to complex AI systems i.e., you need more than just access to the source code to understand how these systems work. Everyone — from developers and policymakers to researchers and consumers — needed a common understanding of "Open Source AI." The organization began co-developing the first version of the <u>Open Source AI Definition</u>, or OSAID, and released it in October 2024 with more than 20 <u>organizational endorsements</u>. The definition is a foundation on which additional parameters can be built to address a variety of use cases in the public and private sectors. OSI recognizes the definition may evolve as discussions continue around AI systems.

The Definition: What is Open Source AI?

An *Open Source AI* is an AI system made available under terms and in a way that grants the freedoms to:

- **Use** the system for any purpose and without having to ask for permission.
- **Study** how the system works and inspect its components.
- **Modify** the system for any purpose, including to change its output.
- **Share** the system for others to use with or without modifications, for any purpose.

The preferred form of making modifications to a machine-learning system must include all the elements below:

- **Data Information**: Preferably the original data, or if it is not legally possible, sufficiently detailed information about the data used to train the system so that a skilled person can build a substantially equivalent system. Data Information shall be made available under OSI-approved terms.
- **Code**: The complete source code used to train and run the system. The code shall represent the full specification of how the data was processed and

filtered, and how the training was done. Code shall be made available under OSI-approved licenses.

• **Parameters**: The model parameters, such as weights or other configuration settings. Parameters shall be made available under OSI-approved terms.

Data Commons in Open Source Al

In addition to the OSAID, OSI is working to promote data governance as a critical component of Open Source AI. OSI released a <u>white paper</u>, "Data Governance in Open Source AI: Enabling Responsible and Systematic Access" in partnership with Open Futures, a think tank developing new approaches to the open Internet. In the white paper, we suggest adopting a data *commons* approach that recognizes the various complexities of data sharing and envisions an Open Source AI ecosystem that can include both open and restricted datasets. For example, sharing the dataset used to train an AI system allows others to interrogate it and address biases and inaccuracies. However, there are many instances where an underlying dataset may be restricted or only available through tiered-access for valid reasons such as protecting patient privacy, respecting indigenous knowledge, or adhering to intellectual property laws. Open Source AI models with these different types of datasets play an important role in society and should be governed by a data commons that encourages transparency while respecting the nuances of each.

Open Source is Imperative in an AI Action Plan

At a time when AI is evolving rapidly, the U.S. government's AI Action Plan should include Open Source AI as a foundation to ensure as many minds as possible from startups and researchers to major tech firms — are working to find the next innovation. Driving collaboration through Open Source can bolster the competitiveness of US companies on the world stage. Competitiveness is enhanced because the freedoms of Open Source AI mean frictionless sharing and developing across projects so that the best ideas are not siloed, but rather debated and built upon. The value of Open Source was highlighted in a 2024 paper where researchers found that, without Open Source Software, companies would need to spend an estimated 3.5 times more or nearly \$9 trillion to build the software that powers their businesses.⁷

Since the dawn of the Internet, Open Source has been recognized as a building block to develop and scale technology. To this end, we recommend that the AI Action Plan encourage the development and use of Open Source AI models in both the public and private sectors to speed discovery and application of AI in ways that benefit public wellbeing. We also invite the U.S. government to work with us and our partners to further unify the tech community around a definition of Open Source AI. A common understanding will remove confusion and enable more innovation.

OSI appreciates the opportunity to provide input on the U.S. government's AI Action Plan and welcomes engagement with our community on the issues of Open Source and Open Source AI.

Sincerely,

Open Source Initiative **Contact:** Katie Steen-James, Senior U.S. Policy Manager (<u>katie@opensource.org</u>)

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⁷ Hoffmann, Manuel, Frank Nagle, and Yanuo Zhou. "<u>The Value of Open Source Software</u>." Harvard Business School Working Paper, No. 24-038, January 2024.