December 6, 2018

Matthew S. Borman
Deputy Assistant Secretary for Export Administration
Bureau of Industry and Security
U.S. Department of Commerce
14th Street and Pennsylvania Avenue NW
Washington, DC 20230

Dear Mr. Borman,

On behalf of the Center for Data Innovation (datainnovation.org), we are pleased to submit comments in response to the advanced notice of proposed rulemaking (ANPRM) on the review of controls for certain emerging technologies (Docket No. 180712626-8840-01).[1]

The Center for Data Innovation is the leading think tank studying the intersection of data, technology, and public policy. With staff in Washington, D.C., and Brussels, the Center formulates and promotes pragmatic public policies designed to maximize the benefits of data-driven innovation in the public and private sectors. It educates policymakers and the public about the opportunities and challenges associated with data, as well as important data-related technology trends. The Center is a non-profit, non-partisan research institute affiliated with the Information Technology and Innovation Foundation.

The Department of Commerce is seeking comments to determine whether there are specific emerging technologies that are important to the national security of the United States for which effective controls can be implemented that avoid negatively impacting U.S. leadership in the science, technology, engineering, and manufacturing sectors. Specifically, Commerce is interested in whether to include artificial intelligence (AI) and machine learning (ML) technologies. We strongly urge Commerce to exclude AI and ML technologies from export controls.

AI and ML are important dual-use technologies that have both civilian and military applications. However, the vast majority of uses of AI and ML technologies will be for civilian applications.[2] Export restrictions on AI and ML technology could substantially reduce commercial opportunities for U.S. technology companies to sell their AI-enabled products and services. In its place, firms from other

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[1] "Review of Controls for Certain Emerging Technologies," *Federal Register*, Vol. 83, No. 223. November 19, 2018, https://www.gpo.gov/fdsys/pkg/FR-2018-11-19/pdf/2018-25221.pdf.
[2] Daniel Castro and Joshua New, "The Promise of Artificial Intelligence" (Center for Data Innovation, October 2016), http://www2.datainnovation.org/2016-promise-of-ai.pdf.

countries would likely step in to provide products and services to these markets, reducing revenue that could fund additional R&D in U.S. firms. Given that the United States is facing enormous competitive pressure from other countries, including geopolitical adversaries, who are striving to overtake its early lead in AI, this type of limitation would be seriously damaging to U.S. AI technology firms and overall U.S. competitiveness and given an unnecessary advantage to U.S. competitors.

Moreover, the broad list of AI and ML technologies described in the ANPRM, including neural networks, computer vision, expert systems, natural language processing, as well as other technologies such as data analytics technology and context-aware computing, are widely used technology. For example, many companies have actively developed and deployed expert systems since at least the 1980s.[3] Similarly, natural language processing is a field of computer science that has a rich history beginning in the 1950s.[4] While these technologies are seeing new advancements from steady progress in AI and ML, they should not be classified as emerging technologies.

For these reasons, we recommend Commerce not apply export controls to AI and ML technology.

Sincerely,

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[3] T. Grandon Gill, "Early Expert Systems: Where are they now?" *MIS Quarterly*, March 1995, https://www.jstor.org/stable/249711.
[4] John Hutchins, "The first public demonstration of machine translation: the Georgetown-IBM system, 7th January 1954," March 2006, http://www.hutchinsweb.me.uk/GU-IBM-2005.pdf.