To require the Secretary of Commerce to establish the Federal Advisory Committee on the Development and Implementation of Artificial Intelligence, and for other purposes.

IN THE SENATE OF THE UNITED STATES

Ms. Cantwell (for herself, Mr. Young, and Mr. Markey) introduced the following bill; which was read twice and referred to the Committee on

A BILL

To require the Secretary of Commerce to establish the Federal Advisory Committee on the Development and Implementation of Artificial Intelligence, and for other purposes.

Be it enacted by the Senate and House of Representa-
tives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the “Fundamentally Under-
standing the Usability and Realistic Evolution of Artificial
Intelligence Act of 2017” or the “FUTURE of Artificial
Intelligence Act of 2017”.

SEC. 2. SENSE OF CONGRESS.

It is the Sense of Congress that—

(1) understanding and preparing for the ongoing development of artificial intelligence is critical to the economic prosperity and social stability of the United States;

(2) as artificial intelligence evolves, it can greatly benefit society by powering the information economy, fostering better informed decisions and helping unlock answers to questions that, as of the date of the enactment of this Act, are unanswerable;

(3) for the reasons set forth in paragraph (2) it is beneficial to better understand artificial intelligence and foster the development of artificial intelligence in a manner that maximizes its benefit to society; and

(4) it is critical that the priorities of the advisory committee established under section 4(a)(1) include developing guidance or recommendations—

(A) to promote a climate of investment and innovation to ensure the global competitiveness of the United States;

(B) to optimize the development of artificial intelligence to address the potential growth, restructuring, or other changes in the United
States workforce that results from the development of artificial intelligence;

(C) to promote and support the unbiased development and application of artificial intelligence; and

(D) to protect the privacy rights of individuals.

SEC. 3. DEFINITIONS.

(a) In General.—Except as provided in subsection (b), in this Act:

(1) Artificial intelligence.—The term “artificial intelligence” includes the following:

(A) Any artificial systems that perform tasks under varying and unpredictable circumstances, without significant human oversight, or that can learn from their experience and improve their performance. Such systems may be developed in computer software, physical hardware, or other contexts not yet contemplated. They may solve tasks requiring human-like perception, cognition, planning, learning, communication, or physical action. In general, the more human-like the system within the context of its tasks, the more it can be said to use artificial intelligence.
(B) Systems that think like humans, such as cognitive architectures and neural networks.

(C) Systems that act like humans, such as systems that can pass the Turing test or other comparable test via natural language processing, knowledge representation, automated reasoning, and learning.

(D) A set of techniques, including machine learning, that seek to approximate some cognitive task.

(E) Systems that act rationally, such as intelligent software agents and embodied robots that achieve goals via perception, planning, reasoning, learning, communicating, decision-making, and acting.

(2) ARTIFICIAL GENERAL INTELLIGENCE.—The term “artificial general intelligence” means a notional future artificial intelligence system that exhibits apparently intelligent behavior at least as advanced as a person across the range of cognitive, emotional, and social behaviors.

(3) NARROW ARTIFICIAL INTELLIGENCE.—The term “narrow artificial intelligence” means an artificial intelligence system that addresses specific application areas such as playing strategic games, lan-
language translation, self-driving vehicles, and image recognition.

(b) MODIFICATIONS.—The Federal Advisory Committee on the Development and Implementation of Artificial Intelligence established under section 4(a) may revise such definitions under subsection (a) of this section as the advisory committee considers appropriate.

SEC. 4. ESTABLISHMENT OF FEDERAL ADVISORY COMMITTEE ON THE DEVELOPMENT AND IMPLEMENTATION OF ARTIFICIAL INTELLIGENCE.

(a) Establishment.—

(1) IN GENERAL.—The Secretary of Commerce shall establish a Federal advisory committee to advise the Secretary on matters relating to the development of artificial intelligence.

(2) DESIGNATION.—The Federal advisory committee established under paragraph (1) shall be known as the “Federal Advisory Committee on the Development and Implementation of Artificial Intelligence” (in this section the “Advisory Committee”).

(b) PURPOSES OF THE ADVISORY COMMITTEE.—

(1) ADVICE.—The Advisory Committee shall provide advice to the Secretary on matters relating to the development of artificial general intelligence
and narrow artificial intelligence, including on the following as they relate to artificial intelligence:

(A) The competitiveness of the United States, including matters relating to the promotion of public and private sector investment and innovation into the development of artificial intelligence.

(B) Workforce, including matters relating to the potential for using artificial intelligence for rapid retraining of workers, due to the possible effect of technological displacement.

(C) Education, including matters relating to science, technology, engineering, and mathematics education to prepare the United States workforce as the needs of employers change.

(D) Ethics training and development for technologists working on artificial intelligence.

(E) Matters relating to open sharing of data and the open sharing of research on artificial intelligence.

(F) International cooperation and competitiveness, including matters relating to the competitive international landscape for artificial intelligence-related industries.
(G) Accountability and legal rights, including matters relating to the responsibility for any violations of laws by an artificial intelligence system and the compatibility of international regulations.

(H) Matters relating to machine learning bias through core cultural and societal norms.

(I) Matters relating to how artificial intelligence can serve or enhance opportunities in rural communities.

(J) Government efficiency, including matters relating to how to promote cost saving and streamline operations.

(2) STUDY.—The Advisory Committee shall study and assess the following:

(A) How to create a climate for public and private sector investment and innovation in artificial intelligence.

(B) The possible benefits and effects that the development of artificial intelligence may have on the economy, workforce, and competitiveness of the United States.

(C) Whether and how networked, automated, artificial intelligence applications and robotic devices will displace or create jobs and
how any job related gains relating to artificial intelligence can be maximized.

(D) How bias can be identified and eliminated in the development of artificial intelligence and in the algorithms that support them, including with respect to the following:

(i) The selection and processing of data used to train artificial intelligence.

(ii) Diversity in the development of artificial intelligence.

(iii) The ways and places the systems are deployed and the potential harmful outcomes.

(E) Whether and how to incorporate ethical standards in the development and implementation of artificial intelligence.

(F) How the Federal Government can encourage technological progress in implementation of artificial intelligence that benefits the full spectrum of social and economic classes.

(G) How the privacy rights of individuals are or will be affected by technological innovation relating to artificial intelligence.

(H) Whether technological advancements in artificial intelligence have or will outpace the
legal and regulatory regimes implemented to protect consumers.

(I) How existing laws, including those concerning data access and privacy, should be modernized to enable the potential of artificial intelligence.

(J) How the Federal Government utilizes artificial intelligence to handle large or complex data sets.

(K) How ongoing dialogues and consultations with multi-stakeholder groups can maximize the potential of artificial intelligence and further development of artificial intelligence technologies that can benefit everyone inclusively.

(L) How the development of artificial intelligence can affect cost savings and streamline operations in various areas of government operations, including health care, cybersecurity, infrastructure, and disaster recovery.

(M) Such other matters as the Advisory Committee considers appropriate.

(3) REPORTS AND RECOMMENDATIONS.—

(A) REPORT BY ADVISORY COMMITTEE.—

Not later than 540 days after the date of the
enactment of this Act, the Advisory Committee shall submit to the Secretary and to Congress a report on the findings of the Advisory Committee and such recommendations as the Advisory Committee may have for administrative or legislative action relating to artificial intelligence.

(B) Recommendations of Secretary.—
Not later than 90 days after receiving the report submitted under subparagraph (A), the Secretary shall review the report and submit to Congress such recommendations as the Secretary may have with respect to the matters contained in the report submitted under subparagraph (A).

(c) Membership.—

(1) Voting Members.—

(A) In general.—The Advisory Committee shall be composed of 19 voting members who shall be appointed by the Secretary of Commerce, with advisement from the Chair and Ranking Member of the Committee on Commerce, Science, and Transportation of the Senate and the Chair and Ranking Member of the Committee on Energy and Commerce of the
House of Representatives, for purposes of the Advisory Committee from among individuals with expertise in matters relating to workforce development, ethics, privacy, artificial intelligence, or computer science.

(B) Representation.—In carrying out subparagraph (A), the Secretary shall ensure that voting members are appointed as follows:

(i) Five members from academic or research community.

(ii) Six members from private industry, at least one of whom shall be from a small business concern.

(iii) Six from civil society, at least two of whom shall be from groups that advocate for civil liberties or civil rights.

(iv) Two from labor organizations or groups.

(C) Geographical Diversity.—In carrying out subparagraph (A), the Secretary shall ensure that the voting members of the Advisory Committee come from diverse geographical locations within the United States.

(2) Nonvoting Members.—The Advisory Committee shall also be composed of such nonvoting
members as the Secretary considers appropriate, except that the Secretary shall appoint at least one such member from each of the following:

(A) The Department of Education.

(B) The Department of Justice.

(C) The Department of Labor.

(D) The Department of Transportation.


(F) The National Institute of Standards and Technology.

(G) The National Science Foundation.

(H) The National Science and Technology Council.

(I) Such other nonvoting members as the voting members of the Advisory Committee consider appropriate.

(3) CHAIRPERSON.—The Secretary shall appoint a chairperson for the Advisory Committee from among the members appointed under paragraph (1).

(d) MEETINGS.—The Advisory Committee shall meet—

(1) in person no less frequently than twice each year; and
(2) via telepresence no less frequently than once every two months.

(e) POWERS.—In order to carry out its duties under subsection (b), the Advisory Committee may—

(1) hold such hearings, sit and act at such times and places, take such testimony, and receive such evidence as the Advisory Committee considers appropriate;

(2) submit to Congress such recommendations as the Advisory Committee considers appropriate;

(3) submit to Federal agencies such recommendations as the Advisory Committee considers appropriate;

(4) issue reports, guidelines, and memoranda;

(5) hold or host conferences and symposia;

(6) enter into cooperative agreements with third-party experts to obtain relevant advice or expertise, and oversee staff;

(7) establish subcommittees; and

(8) establish rules of procedure.

(f) TRAVEL EXPENSES.—The members of the Advisory Committee shall be allowed travel expenses, including per diem in lieu of subsistence, at rates authorized for employees of agencies under subchapter I of chapter 57 of title 5, United States Code, while away from their homes
or regular places of business in the performance of services for the Advisory Committee.

(g) **Funding.**

(1) **In general.**—Except as provided in paragraph (2), amounts to carry out this section shall be derived from amounts appropriated or otherwise made available to the Secretary of Commerce.

(2) **Donations.**

(A) **Authorization.**—The Advisory Committee may solicit and accept donations from private persons and non-Federal entities to carry out this section.

(B) **Limitation.**—Of the amounts expended by the Advisory Committee in a fiscal year to carry out this section, not more than half may be derived from amounts received under subparagraph (A).