First Look: Artificial Intelligence Reporting Act of 2018 (HR 6090, 115th Congress)

Requires the Machine Learning and Artificial Intelligence Subgroup of the National Science and Technology Council to report current Federal AI strategies and uses to Congress.

Updated last July 10, 2018 for the 06/13/2018 version of HR 6090.

WHAT IT DOES

The Artificial Intelligence Reporting Act of 2018, or AIR Act of 2018, requires the subgroup on Machine Learning and Artificial Intelligence of the Committee on Technology in the National Science and Technology Council to report on current strategy and usage of AI in the Federal Government. Specifically, the subgroup on Machine Learning and Artificial Intelligence will provide an annual report to the Committee on Oversight and Government Reform and the Committee on Science, Space, and Technology in the House of Representatives, and the Committee on Commerce, Science, and Transportation in the Senate.

Contents of the subgroup’s report will include:

- A coordinated plan for novel AI research and development developed in conjunction with the Networking and Information Technology Research and Development program, its affiliated subgroups, and the Robotics and Intelligent Systems Interagency Working Group;
- A catalog on current unclassified uses of AI in the Federal Government;
- Current strategies enacted by the Federal Government to create a diverse AI workforce.

RELEVANT SCIENCE

There is currently no universally agreed-upon definition of artificial intelligence. The term "intelligence" is understood as a measure of a machine's ability to successfully achieve an intended goal. Like humans, machines exhibit varying levels of intelligence subject to the machine's design and training. However, there are different perspectives on how to define and categorize AI.

In 2009, a foundational textbook classified AI into four categories:

- Ones that think like humans;
- Ones that think rationally;
- Ones that act like humans; and
- Ones that act rationally.

Most of the progress seen in AI has been considered "narrow," having addressed specific problem domains like playing games, driving cars, or recognizing faces in images. In recent years, AI applications have surpassed human abilities in some narrow tasks, and rapid progress is expected to continue, opening new opportunities in critical areas such as health, education, energy, and the environment. This contrasts with "general" AI, which would replicate intelligent behavior equal to or surpassing human abilities across the full range of cognitive tasks. Experts involved with the National Science and Technology Council (NSTC) Committee on Technology believe that it will take decades before society advances to artificial "general" intelligence.
Machine learning, the basis for many of the recent advances in AI, is a method of data analysis that attempts to find structure (or a pattern) within a data set without human intervention. Machine learning systems search through data to look for patterns and adjust program actions accordingly, a process defined as training the system. To perform this process, an algorithm (called a model) is given a training set (or teaching set) of data, which it uses to answer a question. For example, for a driverless car, a programmer could provide a teaching set of images tagged either “pedestrian” or “not pedestrian.” The programmer could then show the computer a series of new photos, which it could then categorize as pedestrians or non-pedestrians. Machine learning would then continue to independently add to the teaching set. Every identified image, right or wrong, expands the teaching set, and the program effectively gets “smarter” and better at completing its task over time.

STATUS

HR 6090 was introduced in the House of Representatives on June 13, 2018 and subsequently referred to the House Committee on Science, Space, and Technology.

SPONSORS

Sponsor: Representative Brenda Lawrence (D-MI-14)

Cosponsors:

- Representative Daniel Lipinski (D-IL-3)

PRIMARY AUTHOR

Scott "Esko" Brummel, MA

RECOMMENDED CITATION


LICENSE

This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License. Please distribute widely but give credit to Duke SciPol, linking back to this page if possible.