

White House Releases Report on the Future of Artificial Intelligence

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On October 12, 2016, the White House released a report entitled *Preparing for the Future of Artificial Intelligence*. The report surveys the current state of Artificial Intelligence (AI), its existing and potential applications, and the questions that progress in AI raises for society and public policy. The publication of the report follows a series of public outreach activities conducted by the White House Office of Science and Technology Policy (OSTP), including [public workshops on AI topics](#) and requests for input from the public.

The report identifies many ways in which AI could contribute to economic growth and enhance social welfare. It describes AI's potential to solve some of society's greatest challenges and inefficiencies by opening up new opportunities for progress in critical areas such as healthcare, education, transportation, criminal justice, economic inclusion, energy, and the environment. In light of these potential benefits, the report calls for increased funding for AI for many federal agencies, particularly those agencies working on poverty reduction and issues related to economic inequality. The OSTP cautions, however, that the AI industry must manage the risks and challenges of AI technology in order to ensure that all members of the public have the opportunity to help build and benefit from AI-enhanced society. The report also identifies ways in which the regulatory system might adapt to AI in order to lower barriers to innovation without adversely impacting safety or market fairness.

The report identifies several policy concerns raised by AI, including its potential impact on privacy, fairness, safety, jobs, and the economy:

- **Privacy of Personal Information.** The report identifies concerns with the ability to guarantee transparency in AI-related data collection. The report suggests that transparency is challenging to achieve in AI in part because AI data and algorithms can be opaque. Furthermore, it is challenging to obtain explanations for AI-based determinations, the report notes, as "there are inherent challenges in trying to understand and predict the behavior of advanced AI systems."
- The report emphasizes that widespread adoption of AI might have the capacity to compromise fairness. AI, on its own, can lack a built-in understanding of relevant historical

context. As AI replaces decisions traditionally made by human-driven bureaucratic processes, therefore, the report notes concerns about how to ensure justice, fairness, and accountability. For example, if a machine learning model is used to screen job applicants, and if the data used to train the model reflects past decisions that are biased, the result could perpetuate past bias.

- The report details the safety and control issues inherent in building AI systems. It underscores the importance of identifying methods to safely transition AI from the “closed world” of the government laboratory into the outside “open world” where a system is likely to encounter unpredictable objects and situations. The report directs AI practitioners to learn more about verification and validation, managing risk, and communicating with stakeholders about that risk.
- ***Jobs and the Economy.*** The report indicates that AI's chief short-term economic effect will be on the automation of tasks that could not previously be automated. While this will increase productivity and contribute to economic growth in the long run, it may also reduce demand for certain lower-wage jobs that require automatable skills.

The report offers a number of recommendations for policymakers and players in the AI industry. It broadly encourages private and public institutions to examine whether and how they can leverage AI and machine learning in order to benefit society. It also urges academic institutions to include as an integral part of their AI, machine learning, and computer science curricula the privacy, ethics, security, and safety implications of AI.

The White House also released a companion report entitled *National Artificial Intelligence Research and Development Strategic Plan*, which sets forth a plan for federally funded research and development of AI. In the coming months, the White House intends to release a follow-up report that will explain in further detail the effect of AI-driven automation on jobs and the economy.