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Request for Information: Development of a 2025 National Artificial Intelligence Research and Development Strategic Plan

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Submitter Information

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General Comment

The government's critical role in supporting discoveries in science and technology is self-evident if we look back at history. At the same time, we have to acknowledge the unpredictability of scientific discovery. For many engineering projects, good planning and a competent workforce are guaranteed success; however, in scientific discovery, overly planning and thinking through beforehand may lead to fruitful outcomes, but not a guaranteed breakthrough. Therefore, my point is that there should be a sustainable percentage of government funding to support exploratory discovery, which may lead to new technologies, discoveries, and new directions that can bring in new growth in our economy in several decades. It is similar to planting seeds for a new generation of neural networks and reinforcement learning for the next several decades. Another point is to encourage exploring new paradigms of the AI framework. The current AI technology has demonstrated many exceptional merits in many fields; however, regarding understanding the thinking pathway of AI, it is particularly vulnerable and unreliable. Without overcoming this obstacle, many advanced implementations and applications can be questionable. The third point I want to make is about the owners of the current AI technologies, which are primarily owned by private for-profit companies, whose primary goal is not to be responsible to the general public, but to make profits. The government has to play a critical role in AI R&D, especially if we think AI is a new era after the Internet/information/IT revolution, to ensure the existence of an entity (i.e., government) that puts the general public's interests first in the critical transition times.

Attachments

FRI_AI_RD_StrategicPlan

The government's critical role in supporting discoveries in science and technology is self-evident if we look back at history. At the same time, we have to acknowledge the unpredictability of scientific discovery. For many engineering projects, good planning and a competent workforce are guaranteed success; however, in scientific discovery, overly planning and thinking through beforehand may lead to fruitful outcomes, but not a guaranteed breakthrough. Therefore, my point is that there should be **a sustainable percentage of government funding to support exploratory discovery**, which may lead to new technologies, discoveries, and new directions that can bring in new growth in our economy in several decades. It is similar to planting seeds for a new generation of neural networks and reinforcement learning for the next several decades. Another point is to encourage exploring **new paradigms of the AI framework**. The current AI technology has demonstrated many exceptional merits in many fields; however, regarding understanding the thinking pathway of AI, it is particularly vulnerable and unreliable. Without overcoming this obstacle, many advanced implementations and applications can be questionable. The third point I want to make is about the owners of the current AI technologies, which are primarily owned by private for-profit companies, whose primary goal is not to be responsible to the general public, but to make profits. The government has to play a critical role in AI R&D, especially if we think AI is a new era after the Internet/information/IT revolution, to ensure the existence of **an entity (i.e., government) that puts the general public's interests first in the critical transition times**.