



51 Astor Place
New York, NY 10003

June 27, 2017

Dear Members of Congress, Industry Leaders, and Policy Experts,

Artificial Intelligence is reshaping our world. It is an exciting time, but one that prompts necessary questions. I am encouraged that leaders in Congress have recognized the power of this technology by convening an Artificial Intelligence Caucus, led by Congressman John Delaney (MD-06), and Congressman Pete Olson (TX-22). I look forward to discussing important AI-related issues and opportunities this week when I visit Washington, D.C.

The impact of AI is evident in the debate about its societal implications – with some fearful prophets envisioning massive job loss, or even an eventual AI “overlord” that controls humanity. I must disagree with these dystopian views. When you actually do the science of machine intelligence, and when you actually apply it in the real world of business and society – as we have done at IBM to create our pioneering cognitive computing system, Watson – you understand that this technology does not support the fear-mongering commonly associated with the AI debate today.

The real disaster would be abandoning or inhibiting cognitive technology before its full potential can be realized. We pay a significant price every day for not knowing what can be known: not knowing what’s wrong with a patient; not knowing where to find critical natural resources; or not knowing where the risks lie in our global economy.

It’s time to move beyond fear tactics and refocus the AI dialogue on three priorities I believe are core to this discussion: Intent, Skills and Data.

Intent: human augmentation versus replacement

Technological advancements have always stoked fears and concern over mass job loss. But history suggests that AI, similar to past revolutionary technologies, will not replace humans in the workforce. Rather, it will augment different types of jobs. We should remember that technologies such as the bar code scanner and the ATM also prompted concerns about widespread unemployment – and ultimately increased productivity, transformed our way of life, and drove job creation.

Moreover, high-value artificial intelligence systems are specifically designed to augment human intelligence, not replace workers. These are systems that are scaling the number of threats cybersecurity analysts are able to assess daily, or allowing doctors to tap into insights from hundreds of thousands of academic publications and prior experiences to make better diagnoses.

Ultimately these roles still require human decision-making. People must still choose the best course of action when an AI system has identified a problem or returned a recommendation. Critical decisions require human judgement, morals and intuition – AI does not change that.

Skills training and education

This does not mean that policymakers or industry leaders should sit back and do nothing. There are actions we must take to ensure the workforce is prepared to embrace the era of AI and the ways it will augment our economy. Our current policies simply are not up to the task.

First, we should abandon any notion of taxing automation. Penalizing technological progress would stifle innovation and threaten America’s competitive advantage. We also cannot kid ourselves into thinking that a universal basic income will solve the challenge of certain tasks being automated.





51 Astor Place
New York, NY 10003

June 27, 2017

Such prescriptions are short term cop-outs that ignore the problem: that the US has a shortage of workers with the skills needed to work in partnership with AI systems.

What we should focus on is realigning America's education system to emphasize skills rather than degrees. Many of the jobs available today in fields where AI is being applied require specific technical skills, but not always a bachelor's degree.

Preparing more U.S. students and workers for success in these well-paying New Collar Jobs is essential if we want a workforce that is ready to fully capitalize on AI's economic promise.

Algorithmic Transparency and data governance

We must also know how an AI system comes to one conclusion over another. People have a right ask how an intelligent system suggests certain decisions and not others, especially when the technology is being applied across industries such as healthcare, banking and cybersecurity. And our industry has a responsibility to answer.

We must help citizens understand how artificial intelligence technologies work, so they recognize that AI can serve to root out bias rather than perpetuate it. Companies must be able to explain what went into their algorithm's decision-making process. If they can't, then their systems shouldn't be on the market.

[At IBM](#), we have always ensured that we can explain the inferences that come from our AI technologies, and we will continue to do this as AI systems evolve.

We must also ensure that those working with AI are responsible stewards of public and private data.

Americans need to have confidence that their data and rights will be protected when even rudimentary AI-powered devices can capture audio and video of a person's every word and move. That is why we at IBM have always believed that people's data is their own, and that data policies should be fair and equitable, prioritize openness, and respect intellectual property.

These are the places where the conversation of AI should begin. I look forward to discussing them this week with members of Congress, and with industry and policy leaders in the months to come.

As we have since the earliest days of our company, IBM will gladly serve as source of technical expertise and insight to any policymaker who wants to understand the real workings of AI. This revolutionary technology has enormous potential – but we must ensure that our understanding of it is grounded in reality, not fantasy.

Regards,

Senior Vice President, IBM Watson and Cloud Platform

