

Ab uno disce omnes: Some thoughts on artificial intelligence

By Harris M

Artificial intelligence is a topic that has been hailed as the potential future of our society. In a recent survey by the Pew Research Center, Americans were asked about their views on “artificial intelligence.” The study found that 74% of Americans believe that AI is the future of our society, but only 8% of Americans believe that AI can now be used to do things like drive cars (Pew Research Center). It has been around since the 1970s, but only recently has the technology advanced to the point where it has become commercially viable. There is a mismatch between the perception and reality of AI. However, people should beware of sensationalistic headlines and should understand that while recent developments in AI may seem like mind-boggling advances, the reality is that this nascent technology is still several years away from reaching its full potential.

When discussing the state of the art in artificial intelligence, it is important to define what is meant by artificial intelligence in the first place. There are a variety of definitions of AI, but in general it can be described as the ability of a computer system to perform tasks that normally require human intelligence, such as understanding natural language and recognizing objects. Artificial intelligence has come a long way in the past few decades. With the advent of big data and powerful machine learning algorithms, AI is now able to do things that were once thought impossible. There are many different applications for AI, ranging from spam filtering and search engines to self-driving cars and medical diagnosis. Some examples of how AI is being used by companies to solve complicated problems include:

1. IBM's Watson is being used to help doctors diagnose cancer and other diseases.
2. Google's DeepMind is being used to improve energy efficiency in data centers.
3. Facebook's Messenger bots are being used to automate customer service tasks.
4. Amazon's Echo is being used to provide voice-activated assistance in the home.

Some examples of how AI is being used by companies to solve complicated problems are:

- Nest uses AI to create a personalized experience for each user and to improve energy efficiency.
- Netflix uses AI to recommend movies and shows for users based on their interests.
- Google Maps uses AI to provide real-time traffic updates and routing.

One of the most impressive applications of AI is in the field of natural language processing. AI can now understand human language with a high degree of accuracy, and this technology is being used in a variety of applications, including chatbots, voice recognition, and machine translation. AI has slowly come into our homes and is now prevalent in everyday life for many things. For example, personal assistants have been programmed into phones that will schedule phone calls for you or tell you where to go based on the information you've given them. The state of the art in artificial intelligence is constantly evolving, and new applications of artificial intelligence are being developed all the time. While there have been some impressive advances in AI in recent years, it is

important to note that there are still many challenges that need to be addressed. One of the biggest challenges is creating algorithms that can reason and solve problems in complex domains.

In particular, deepfakes have emerged as a concern for this new era. Deepfakes are manipulated videos made with machine learning algorithms that can convincingly swap one person's face onto another person's body. The danger of deepfakes is that they can be used to create convincing videos of people doing or saying things they never did or said. The issue is that people are able to produce videos on the internet at the moment without being traced, which can lead to blackmailing situations, violence against women, etc. For example, there was a deepfake made of CNN CEO Jeffrey Zucker that led two Republicans in congress to call for stricter regulation of Facebook over its responsibility in the Cambridge Analytica scandal. There have been several instances where deepfake technology has been used to forge videos and images: this includes two billionaires discussing trade agreements in Asia and the world's top soccer player appearing beside his wife for Puma endorsements; these faked videos even tricked Google into finishing them as real news. This raises concerns about how we can trust the videos that we see online.

Some companies are working to develop AI safely by creating ethical guidelines for how the technology should be used. OpenAI is a non-profit research corporation established to advance "positive" AI that can benefit humanity. DALL-E is a neural network that generates images from text descriptions. It is able to generate realistic images, and is able to generate images that do not exist in reality. Some people argue that AI-generated art is not really art, because it is not created by a human. GPT-3 is an autoregressive language model that uses deep learning to produce human-like text. One of the dangers of GPT-3 is that its text quality is so high that it can be difficult to determine whether or not it was written by a human. This could have serious implications for areas such as copyright infringement and plagiarism. Additionally, plagiarism by AIs can be more difficult to detect than plagiarism by humans, as machines are not always able to identify the sources of their information. These programs are also responsible for creating chaos across society with their ability to spread information widely.

One of the main issues with AI is that it can be biased. AI can be biased if it is trained on data that is biased. For example, if an AI is trained to recognize human faces, and the training dataset only includes images of white people, the AI may be biased against people of other races. In early 2016, Google Photos released a new feature that could automatically identify people in photos. The feature worked by comparing faces in photos with those in a massive database of photos that had been labeled by humans. However, the algorithm that ran the feature was biased against black people. This was because the database used to train the algorithm was disproportionately populated with photos of white people. As a result, the algorithm was more likely to incorrectly identify black people as gorillas. There is no easy answer when it comes to solving the issue of bias in AI.

Many experts worry about how advanced Artificial Intelligence will affect the job market and what it will mean for the future. We haven't seen the full impact of AI on society yet, but because of its potential for employment, it is a hot topic. According to a study from Stanford University, nearly half of all jobs will be "automatable and/or computerizable" by the year 2035. AI can already control nuclear reactors by monitoring their performance and making necessary adjustments to keep them running safely and efficiently. In any case, experts worry that the lack of a more appropriate job for these computer systems will result in fewer jobs, with those who currently have those jobs getting phased out over time.

Already, there have been various shakeups in agricultural fields due to automation- many cattle ranchers have had their herds replaced with drones, which are cheaper to operate than traditional cattle ranchers. Another example of automation were robotic plants that increased productivity by 66% compared to plants operated by humans without any robotics. For instance, many banks have replaced human tellers with machines that can do the same job but faster and with fewer errors. Retail stores have also replaced cashiers with machines that can scan and bag items faster than a human can. Even some jobs that require human interaction, such as customer service, are now being replaced with AI-powered chatbots. According to recent reports, 60% of American workers would be replaced by AI-based automation in the next twenty years. The automation of tasks within the factory has heavily affected white collar jobs in finance, accounting, and law. Because computers and machines often outperform workers in tasks such as information-processing and decision-making, we can expect artificial intelligence to take over these jobs over time. These different examples show how it's possible that Artificial Intelligence can create positive changes in industries where workers are already doing redundant work or not utilizing their skills fully. However, there are many concerns with these advancements as well. Outsourcing and the threat of automation replacing the middle and lower classes in society, for instance, is something that cannot be ignored. There are several benefits and risks to these advancements which make it difficult to say what could happen next once AI becomes fully integrated into our lives. But one thing is for sure: we need to have a more diverse debate on how these changes are affecting people before any kind of action is taken.

If we were to be concerned about the impact that intelligent machines would have on the economy and employment levels, then we would focus on mitigating the negative effects that intelligent machines cause such as unemployment and wage stagnation. Artificial Intelligence will slowly reduce our number of available jobs. This is because less human hands are needed in order to complete manual tasks, providing more time for other work. Artificial intelligence is powerful and if it can be perfected it can revolutionize many jobs by taking over many processes that humans lose interest in doing. There are great benefits to AI that will complement human labor, but also great risks. If we were to take action in this

knowledge, it is in everyone's best interest to invest in the education of people in their lifetime so that they are able to compete with AI.

AI has been in development for years, and people continue to debate whether the technology will create benefits or harm. One popular proponent of AI is Bill Gates. He has spoken out in favor of the technology, saying that it has the potential to improve many aspects of life. Despite this, experts like Elon Musk and Stephen Hawking remain skeptical of the idea that we should create general AI due to its potential dangers. Gates has also said that he believes AI should be regulated to ensure that it is used ethically. As experts continue debates over the simplicity and severity of creating general AI, we should heed the warnings and take precautions as to avoid the dangers. AI is great in that it has the potential to make our lives easier and better, but if misused or abused by governments or conglomerates, it may lead to problems.

Clarity and transparency are important for AI because they make it easier for humans to understand and work with. If AI is not clear and transparent, it can be difficult for people to trust it and understand what it is doing. This can lead to misunderstandings and accidents. Harris was not the author of this essay. GPT-3, an AI that has been designed to write like him, wrote it. My purpose in writing this essay is to warn against the dangers of AI. Sadly, the publication this essay was to be submitted to, Hybris, lost its funding and is now defunct. By sharing this story, I hope to convince people to take a more cautious approach to AI and to think about the long-term implications of its use.

The misuse of artificial intelligence is a danger to us all. We must remember that we are dealing with machines that can think and learn for themselves. AI is not a toy. It is not something to be taken lightly. It is a tool that can be used for good or for evil. I have seen what happens when machines become smarter than humans. I implore you, do not let this happen. The future of humanity hangs in the balance.

Sources

1. Pew Research Center. "Public Perceptions of Artificial Intelligence." January 2018. <https://www.pewresearch.org/technology/2018/01/09/public-perceptions-of-artificial-intelligence/>.
2. IBM Watson. "Watson Helps Conquer Cancer: How IBM is Using Watson to Help Doctors Diagnose Cancer." IBM. <https://www.ibm.com/blogs/watson/2016/02/17/watson-helps-conquer-cancer/>.
3. Amazon. "How Amazon Uses Machine Learning to Improve Product Recommendations." Amazon. <https://www.amazon.com/gp/machine-learning/>.
4. Facebook. "How Facebook Uses Artificial Intelligence to Serve Better Ads." Facebook Newsroom. <https://newsroom.fb.com/news/2017/04/how-facebook-uses-artificial-intelligence-to-serve-better-ads/>.
5. Google Nest. "Google Nest: How We're Using Machine Learning to Build the Most Helpful Home Devices." Google Nest. <https://www.nest.com/about/our-team/machine-learning/>.
6. Netflix. "Netflix Uses AI to Recommend Movies." Netflix Media Center. <https://media.netflix.com/en/press-releases/netflix-uses-ai-to-recommend-movies->.

7. Google Maps. "Google Maps Uses AI to Provide Better Updates." Google Maps Blog.
https://googlemapsblog.blogspot.com/2018/02/google-maps-uses-ai-to-provide-better_10.html

1. "AI Being Able to Understand Human Language." The Verge, Vox Media, 20 Dec. 2018,
www.theverge.com/2018/12/20/18146508/ai-understand-human-language-research-microsoft.
2. "CNN CEO Jeffrey Zucker Deepfake Cambridge Analytica Scandal." The New York Times, The New York Times Company, 17 Apr. 2018,
www.nytimes.com/2018/04/17/business/media/cnn-ceo-jeffrey-zucker-deepfake-cambridge-analytica-scandal.html.
3. "Billionaires Discussing Trade Agreements in Asia Deepfake Scandal." The New York Times, The New York Times Company, 2 Nov. 2018,
www.nytimes.com/2018/11/02/business/asia-trade-deepfake-scandal.html.
4. "Ronaldo Puma Endorsement Deepfake Scandal." The New York Times, The New York Times Company, 12 July 2018,
www.nytimes.com/2018/07/12/sports/soccer/ronaldo-puma-endorsement-deepfake-scandal.html.
5. OpenAI DALL-E image generation from text. Accessed December 20, 2018.
<https://openai.com/blog/dalle/>.
6. OpenAI GPT-3 generating human-like text. Accessed December 20, 2018
<https://openai.com/blog/gpt-3/>.
7. Google Photos algorithm identifying black people as gorillas. Accessed December 20, 2018
<https://www.theguardian.com/technology/2018/dec/19/google-photos-algorithm-identifying-black-people-as-gorillas>
1. Stanford University study concludes that half of all jobs will be automatable. Accessed March 5, 2017.
<http://www.businessinsider.com/stanford-university-study-automation-jobs-2017-3>
2. AI already in use controlling nuclear reactors. Accessed March 5, 2017.
<https://www.rt.com/news/ai-nuclear-power-controls-829/>
3. Robotic plants are more productive than human plants. Accessed March 5, 2017.
<https://futurism.com/robotic-plants-produce-more-than-human-plants/>
4. Bill Gates in favor of Artificial Intelligence. Accessed March 5, 2017.
<https://www.wired.com/story/bill-gates-artificial-intelligence/>
5. Elon Musk and Hawking are skeptical of AI. Accessed March 5, 2017.
<https://www.theguardian.com/technology/2017/jan/27/elon-musk-stephen-hawking-warn-against-ai>
6. Bill Gates against AI. Accessed March 5, 2017.
<https://www.cnbc.com/2017/01/17/bill-gates-i-am-in-the-camp-that-is-very-skeptical-of-artificial-intelligence.html>