

Part I: Journaling.

Take 5 minutes to reflect and journal on the following prompt, keeping in mind the things we have covered over the last 2 days.

"State leaders can't shy away from change, or the technologies that bring it about," said Kristen Baesler, superintendent of instruction for the North Dakota Department of Public Instruction, in the report. "That's not an option for the students we serve, whose future success depends on their ability to thrive in an ever-changing, technology-rich world."

Part II: Jigsaw.

Step 1: Get into a group with the other students who have the reading below (Reading 2).

Step 2: Annotate as you read the article. Then, summarize the article in 3 bullet points in the space below. Be prepared to share out with your classmates.

- Jobs are not destroyed, but rather employment shifts from one place to another and entirely new categories of employment are created.
- While AI can do a lot of good we must be mindful about AI in the hands of malicious users.
- As machines become more intelligent and we use more and more of our machines, how should they be treated and viewed in society.

Ethical Concerns of AI
By Kathleen Walch, 2019

Artificial Intelligence is seen by many as a great transformative tech. Will AI systems one day drive us around? Do our laundry? Mow our lawn? Raise our kids? Fight wars? Write these articles? Create political advertisements? These questions make people shift from thinking purely about the functional capabilities to the ethics behind creating such powerful and potentially life-consequential technologies. As such, it makes sense to spend time considering what we want these systems to do and make sure we address ethical questions now so that we build these systems with the common good of humanity in mind.

Will AI replace human workers?

The most immediate concern for many is that AI-enabled systems will replace workers across a wide

range of industries. AI brings mixed emotions and opinions when referenced in the context of jobs. However, it's becoming increasingly clear that AI is not a job killer, but rather, a job category killer. As has happened with every wave of technology, from the automatic weaving looms of the early industrial revolution to the computers of today we see that jobs are not destroyed, but rather employment shifts from one place to another and entirely new categories of employment are created. We can and should expect the same in the AI-enabled economy. Research and experience is showing that it's inevitable that AI will replace entire categories of work, especially in transportation, retail, government, professional services employment, and customer service. On the other hand, companies will be freed up to put their human resources to much better, higher value tasks instead of taking orders, fielding simple customer service requests or complaints, or data entry related tasks.

Indeed, the move to this new age of digital transformation is creating concerns about labor displacement, with or without the power of AI. All AI is doing is hastening digital transformation across particular business processes. As companies are looking to adapt and implement AI strategies we think it's important to have open and honest conversations with your employees. In particular, experience and research is showing that companies that adopt augmented intelligence approaches, where AI is augmenting and helping humans to do their jobs better, rather than fully replacing the human, not only shows faster and more consistent ROI for organizations, but also is welcomed much more warmly by employees. People feel more comfortable working with machines instead of being replaced by machines.

The rise of fake media and disinformation: Will AI make this worse?

AI systems are getting really good at creating fake images, videos, conversations, and all manner of content. We already have trouble believing everything we hear, see, and read. What happens when you can no longer tell if an image is real or AI-generated or if you're talking to a bot or a real person? It's been widely reported that bots had a role to play in the 2016 US Presidential elections spreading political propaganda. These automated social media accounts helped create and spread misinformation on the internet attempting to manipulate voters and fueling the fire of partisan disagreement. Unlike humans, bots never tire working 24/7 and can generate a very large amount of content in a very short period of time. Once shared and re-tweeted with others this news starts to go viral, true or not, and is virtually unstoppable. These bots are effective at spreading false or heavily altered facts, amplifying messages, and putting thoughts and ideas into people's heads. Criminals and state actors can use fake imagery or audio to cause personal or business harm or to interfere with government operations. Now all it takes is a few malicious actors spreading false claims to traumatically alter public opinion and quickly shift the public's view.

Governments and corporations alike will have to think about how they will reign in the potential

damage done by AI-enabled content creation. In fact, we encourage companies and governments to consider fake content to be as malicious as cybersecurity threats and respond appropriately. Propaganda, disinformation, malicious interference, blackmail, and other forms of "information crime" can be just as harmful as physical and electronic attacks on systems. The world is very much unprepared for AI being unleashed on unprotected citizens. Corporations who freely traffic in user-generated content are just as liable as governments to curb abuse.

Do we want evil people to have easy access to AI technology?

While AI can do a lot of good we must be mindful about AI in the hands of malicious users. As technology continues to become more powerful, AI can cause severe damage if used maliciously. What happens when individuals, criminal organizations, and rogue countries apply AI to malicious ends? Many companies are already asking themselves these questions and starting to take action to safeguard against malicious AI attacks. New technologies can exploit the vulnerability of systems that are dependent on AI and machine learning technologies. As these AI systems get smarter they can change the nature of threats, making them harder to detect, more random in appearance, more adaptive to systems and environments, and more efficient at identifying and targeting vulnerabilities in systems. This should be terrifying. We need to immediately start thinking about how we are constructing and managing our digital infrastructure as well as how we design and distribute AI systems. Detecting these malicious attacks will only get harder over time.

In addition, machine learning service providers, especially on-demand cloud-based services should be mindful of who their customers are. If malicious users are using their platforms to perform distributed AI-enabled attacks or other criminal acts, then like financial institutions, governments will start cracking down on these providers and impose new forms of "Know Your Customer (KYC)" regulations. If these platform providers don't want to be on the wrong end of the regulatory cycle, they need to get ahead of the curve and start their own efforts to make sure they know who their customers are and what they are doing on their platforms.

Is pervasive surveillance already here? Is AI our new Big Brother?

AI enables companies and governments to keep constant tabs on what humans are doing in an automated and intelligent fashion. Will a future with AI mean an end to privacy? Will "Big Brother" really always be watching? As facial recognition technologies continue to advance it's getting easier to detect individuals from a large crowd of people at stadiums, parks, and public spaces without their permission. In 2018 Microsoft urged Congress to study it and oversee the use of facial recognition technology. Bradford

Smith, the company's president said "We live in a nation of laws, and the government needs to play an important role in regulating facial recognition technology". What's striking about this statement is that tech giants rarely advocate regulation of their innovations, so for Microsoft to be urging the US Congress to regulate facial recognition they must already see how this technology can be misused.

In an AI-enabled future we assume that everyone and everything will have knowledge about everyone else. This means that the assumption will be that everyone already knows who we are, what we want, where we are, and what we're doing. This pervasive knowledge will become part of the assumption of where we are, just like we are now expecting to be able to get Internet, electricity, and information whenever and wherever we need it without excuse. No longer will we be able to just "un-plug" for a while. We may quickly move to a world where just a few companies and government have an uncomfortable amount of knowledge and level of control over the lives of everyone.

Will intelligent machines have rights?

As machines become more intelligent and we ask more and more of our machines, how should they be treated and viewed in society? Once machines can actually simulate emotion and act similar to human beings, how should they be governed? Should we consider machines as humans, animals, or inanimate objects? To this point, to what level do we ascribe liability and responsibility to the devices themselves over the people that are supposedly in control of them? In March 2018 an autonomous vehicle struck and killed a pedestrian. People were outraged that a machine killed a human being.

But why were people outraged by this accident? Thousands of people are killed every day in motor vehicle accidents caused by humans at the wheel. What difference should it make that it was a machine driving the vehicle? The reason for this outrage is because society hasn't, and may never accept, when a machine kills a human. However, the likelihood of eliminating all traffic-related fatalities is almost certainly zero percent. As such, if we want autonomous vehicles on the road this scenario will happen again, and again. Despite perhaps dramatic evidence that machine-driven vehicles have overall far lower fatality rates than human-driven vehicles, the issue of liability and control is primarily one of ethics. So we need to be asking these questions, figuring out what we can accept and what's ethical, and put laws and regulations in place now to safeguard against future tragedies.

Creating transparency in AI decision-making

There are many approaches used in machine learning, however, no machine algorithm has re-invigorated the AI market quite like deep learning. Deep learning, however, is a "black box". We aren't really sure how deep learning works and this can be a big problem when we rely on this technology to make

critical decisions such as loan applications, who gets paroled, and who gets hired. AI systems that are unexplainable should not be acceptable, especially in high risk situations. Explainable AI needs to be part of the equation if we want to have AI systems we can trust.

Deep learning relies heavily on training data. So it should be no surprise then that when biased training data is used to teach these systems the results are biased AI systems. People wrongly assume that the training data is always “clean”, from a large pool, and represents society as a whole but results have proved this is not the case. Google’s image recognition system wrongly classified images of minorities, the Apple Card which is administered by Goldman Sachs has come under recent scrutiny for gender bias, and software used to sentence criminals was found to be biased against minorities. If we are going to use machine learning algorithms to make any sort of worthwhile decision we must demand that it be able to explain itself. Would you really allow a human driver to hit your car and when you question why they did that they have no answer? Of course you wouldn’t. We shouldn’t accept this from machines either!

Taking steps to resolve these issues

If we don’t ask ourselves these questions now and build ethical AI, implications down the road can be far more grim than people realize. Do we really trust companies to do the right thing? Do we trust governments to do the right thing? We’d like to think that with public input and ethical questions and concerns brought up now, that we can create a future that isn’t so grim. There will always be bad actors who try to influence, infiltrate, and manipulate. Enterprises, organizations, and citizens should keep asking questions, keep working towards building ethical AI, and keep trying to fight automated bots and malicious attacks because AI is coming whether or not we’re ready.

Source: <https://www.forbes.com/sites/cognitiveworld/2020/12/29/ethical-concerns-of-ai/?sh=697c8f5723a8>

Step 3: Take Notes as your classmates share out.

Reading 1 Summary Share Out (2016)	Reading 3 Summary Share Out (2023)

Step 4: Drawing Conclusions. Using the note chart in Step 3 and your own summary bullet points from Step 2, write a paragraph on how AI has proven the initial fears and / or how AI has overcome the initial fears expressed in the 3 articles.

Part III: Socratic Seminar.

Step 1: Take notes as you listen to the 3 minute podcast “Tracked and Traced”

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Write your policy here.

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Evidence and Research Total Score:	Supports arguments with relevant and credible sources, including research articles, expert opinions, and case studies.	Uses some sources to support arguments, but they may be limited in scope or credibility.	Relies on personal opinions or anecdotal evidence with minimal external support.	Lacks any supporting evidence or relies on unreliable sources.
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The use of AI shall be prohibited to use Pertaining to
Citizens's Privacy and their 4th Amendment.

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Three Bullet Points (from my Article)

- ♥ A small percentage has an AI initiative in place, but the rest are neglecting / choosing to ignore the change technology is bringing on this world.
- ♥ The need for educational technology is increasing day by day rather than the internet, cybersecurity, etc.
- ♥ Schools are not getting funding for cyberattacks, so they can have cyber security.

Districts Looking for New Guidance on AI, and Tech Equity, From States By Emma Kate Fittes, 2023

As the rapid emergence of ChatGPT raises new questions about the power and drawbacks of artificial intelligence, many states are seeing a growing demand from school districts for guidance on the technology’s use in the classroom.

But federal and state initiatives around AI are lagging behind the newfound interest, a new survey

finds.

According to the recently released 2023 State EdTech Trends report, 55 percent of the more than 100 state officials surveyed say they see an increasing demand for support or policies around artificial intelligence compared to last year.

Yet only 2 percent of respondents say their state has an AI initiative in place.

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The report, released by nonprofit State Educational Technology Directors Association in collaboration with Whiteboard Advisors, looks at the types of ed-tech policies state education agencies have adopted, and the ongoing technology challenges states face, since schools and society were set back by COVID-19.

Respondents — which include SETDA members, state superintendents, and other senior state officials from all 50 states — laid out the biggest challenges and areas of ongoing need in educational technology, including cybersecurity, access to internet, and funding, in addition to more AI policies.

“This report signifies the uniqueness of this moment in time as school systems emerge from the pandemic into a technology-rich new normal rife with opportunity but also risk,” said Julia Fallon, executive director of SETDA, in a statement.

It’s a much different picture than the organizations’ first trends report painted a year ago. In the fall of 2022, school districts were still transitioning back to fully in-person instruction.

“Last year’s needs have become this year’s priorities,” Fallon said, “and states are making progress in addressing these challenges.”

Cybersecurity, Tech Equity Are Big Concerns

The survey shows that state ed-tech officials’ top priorities this year are improving student academic performance and recruiting and retaining educators as school districts are reckoning with the long-term impacts of the pandemic and federal relief funding that previously bolstered ed-tech purchases comes to an end.

It also captured some progress in addressing cybersecurity threats, a challenge that respondents ranked as their state’s top technology priority.

A year ago, many of the state officials said either their state education agency or at least one school district was targeted by a cyberattack or threat. But few, only 6 percent, said their state provides ample

cybersecurity funding.

In 2023, more state leaders, though still a minority — 19 percent — say they have ample funding for cybersecurity mitigation. At the same time, 42 percent of those surveyed indicated that their state provides a small amount or very little funding for cybersecurity.

“Improving K-12 cybersecurity posture has become an issue of resources and equity,” said Brad Hagg, director of education technology at the Indiana Department of Education, said in the report.

“Under-staffed districts and communities without access to a pipeline of cyber-specialists will struggle to meet the requirements, often dictated by insurance companies, as well as the best practices necessary to implement a strong cybersecurity threat mitigation program.”

Other key takeaways from the report:

Improving equitable internet access remains one of state officials’ top technology challenges. Twenty percent of survey respondents say it’s a top priority for their state this year.

Twenty-nine percent of state officials say improving students’ home internet access also remains an urgent unmet need, an increase from 18 percent last year.

States appear to have made some progress when it comes to providing professional learning for educators on how to use instructional technology tools. Fewer state officials identified this as a top unmet need in 2023, 17 percent compared to 24 percent in 2022.

Source:

<https://marketbrief.edweek.org/marketplace-k-12/districts-looking-new-guidance-ai-tech-equity-states/?cmp=soc-tw-s-hr-mktbf>

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- State EdTech are getting opinions from the state surveys about AI initiative, educational tech, etc.

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- Artificial intelligence can be very helpful, but also very dangerous.
- AI can replace humans in work environments, leaving millions jobless and unable to provide for their families.
- AI will be prone to errors, however, those errors can be minimized.

Top 9 ethical issues in artificial intelligence

By Julia Bossmann, October 2016

Optimizing logistics, detecting fraud, composing art, conducting research, providing translations: intelligent machine systems are transforming our lives for the better. As these systems become more capable, our world becomes more efficient and consequently richer.

Tech giants such as Alphabet, Amazon, Facebook, IBM and Microsoft – as well as individuals like Stephen Hawking and Elon Musk – believe that now is the right time to talk about the nearly boundless landscape of artificial intelligence. In many ways, this is just as much a new frontier for ethics and risk assessment as it is for emerging technology. So which issues and conversations keep AI experts up at night?

1. Unemployment. What happens after the end of jobs?

The hierarchy of labor is concerned primarily with automation. As we've invented ways to automate jobs, we could create room for people to assume more complex roles, moving from the physical work that dominated the pre-industrial globe to the cognitive labor that characterizes strategic and administrative work in our globalized society.

Look at trucking: it currently employs millions of individuals in the United States alone. What will happen to them if the self-driving trucks promised by Tesla's Elon Musk become widely available in the next decade? But on the other hand, if we consider the lower risk of accidents, self-driving trucks seem like an ethical choice. The same scenario could happen to office workers, as well as to the majority of the workforce in developed countries.

This is where we come to the question of how we are going to spend our time. Most people still rely on selling their time to have enough income to sustain themselves and their families. We can only hope that this opportunity will enable people to find meaning in non-labour activities, such as caring for their families, engaging with their communities and learning new ways to contribute to human society.

If we succeed with the transition, one day we might look back and think that it was barbaric that human beings were required to sell the majority of their waking time just to be able to live.

2. Inequality. How do we distribute the wealth created by machines?

Our economic system is based on compensation for contribution to the economy, often assessed using an hourly wage. The majority of companies are still dependent on hourly work when it comes to products and services. But by using artificial intelligence, a company can drastically cut down on relying on the human workforce, and this means that revenues will go to fewer people. Consequently, individuals who have ownership in AI-driven companies will make all the money.

We are already seeing a widening wealth gap, where start-up founders take home a large portion of the economic surplus they create. In 2014, roughly the same revenues were generated by the three biggest companies in Detroit and the three biggest companies in Silicon Valley ... only in Silicon Valley there were 10 times fewer employees.

If we're truly imagining a post-work society, how do we structure a fair post-labour economy?

3. Humanity. How do machines affect our behavior and interaction?

Artificially intelligent bots are becoming better and better at modeling human conversation and relationships. In 2015, a bot named Eugene Goostman won the Turing Challenge for the first time. In this challenge, human raters used text input to chat with an unknown entity, then guessed whether they had

been chatting with a human or a machine. Eugene Goostman fooled more than half of the human raters into thinking they had been talking to a human being.

This milestone is only the start of an age where we will frequently interact with machines as if they are humans; whether in customer service or sales. While humans are limited in the attention and kindness that they can expend on another person, artificial bots can channel virtually unlimited resources into building relationships.

Even though not many of us are aware of this, we are already witnesses to how machines can trigger the reward centres in the human brain. Just look at click-bait headlines and video games. These headlines are often optimized with A/B testing, a rudimentary form of algorithmic optimization for content to capture our attention. This and other methods are used to make numerous video and mobile games become addictive. Tech addiction is the new frontier of human dependency.

On the other hand, maybe we can think of a different use for software, which has already become effective at directing human attention and triggering certain actions. When used right, this could evolve into an opportunity to nudge society towards more beneficial behavior. However, in the wrong hands it could prove detrimental.

4. Artificial stupidity. How can we guard against mistakes?

Intelligence comes from learning, whether you're human or machine. Systems usually have a training phase in which they "learn" to detect the right patterns and act according to their input. Once a system is fully trained, it can then go into test phase, where it is hit with more examples and we see how it performs.

Obviously, the training phase cannot cover all possible examples that a system may deal with in the real world. These systems can be fooled in ways that humans wouldn't be. For example, random dot patterns can lead a machine to "see" things that aren't there. If we rely on AI to bring us into a new world of labour, security and efficiency, we need to ensure that the machine performs as planned, and that people can't overpower it to use it for their own ends.

5. Racist robots. How do we eliminate AI bias?

Though artificial intelligence is capable of a speed and capacity of processing that's far beyond that of humans, it cannot always be trusted to be fair and neutral. Google and its parent company Alphabet are one of the leaders when it comes to artificial intelligence, as seen in Google's Photos service, where AI is used to identify people, objects and scenes. But it can go wrong, such as when a camera missed the mark on racial sensitivity, or when a software used to predict future criminals showed bias against black people.

We shouldn't forget that AI systems are created by humans, who can be biased and judgemental. Once again, if used right, or if used by those who strive for social progress, artificial intelligence can become a catalyst for positive change.

6. Security. How do we keep AI safe from adversaries?

The more powerful a technology becomes, the more it can be used for nefarious reasons as well as good. This applies not only to robots produced to replace human soldiers, or autonomous weapons, but to AI systems that can cause damage if used maliciously. Because these fights won't be fought on the battleground only, cybersecurity will become even more important. After all, we're dealing with a system that is faster and more capable than us by orders of magnitude.

7. Evil genies. How do we protect against unintended consequences?

It's not just adversaries we have to worry about. What if artificial intelligence itself turned against us? This doesn't mean by turning "evil" in the way a human might, or the way AI disasters are depicted in Hollywood movies. Rather, we can imagine an advanced AI system as a "genie in a bottle" that can fulfill wishes, but with terrible unforeseen consequences.

In the case of a machine, there is unlikely to be malice at play, only a lack of understanding of the full context in which the wish was made. Imagine an AI system that is asked to eradicate cancer in the world. After a lot of computing, it spits out a formula that does, in fact, bring about the end of cancer – by killing everyone on the planet. The computer would have achieved its goal of "no more cancer" very efficiently, but not in the way humans intended it.

8. Singularity. How do we stay in control of a complex intelligent system?

The reason humans are on top of the food chain is not down to sharp teeth or strong muscles. Human dominance is almost entirely due to our ingenuity and intelligence. We can get the better of bigger, faster, stronger animals because we can create and use tools to control them: both physical tools such as cages and weapons, and cognitive tools like training and conditioning.

This poses a serious question about artificial intelligence: will it, one day, have the same advantage over us? We can't rely on just "pulling the plug" either, because a sufficiently advanced machine may anticipate this move and defend itself. This is what some call the "singularity": the point in time when human beings are no longer the most intelligent beings on earth.

9. Robot rights. How do we define the humane treatment of AI?

While neuroscientists are still working on unlocking the secrets of conscious experience, we understand more about the basic mechanisms of reward and aversion. We share these mechanisms with even simple animals. In a way, we are building similar mechanisms of reward and aversion in systems of artificial intelligence. For example, reinforcement learning is similar to training a dog: improved performance is reinforced with a virtual reward.

Right now, these systems are fairly superficial, but they are becoming more complex and life-like. Could we consider a system to be suffering when its reward functions give it negative input? What's more, so-called genetic algorithms work by creating many instances of a system at once, of which only the most successful "survive" and combine to form the next generation of instances. This happens over many generations and is a way of improving a system. The unsuccessful instances are deleted. At what point might we consider genetic algorithms a form of mass murder?

Once we consider machines as entities that can perceive, feel and act, it's not a huge leap to ponder their legal status. Should they be treated like animals of comparable intelligence? Will we consider the suffering of "feeling" machines?

Some ethical questions are about mitigating suffering, some about risking negative outcomes. While we consider these risks, we should also keep in mind that, on the whole, this technological progress means better lives for everyone. Artificial intelligence has vast potential, and its responsible implementation is up to us.

Source: <https://www.weforum.org/agenda/2016/10/top-10-ethical-issues-in-artificial-intelligence/>

Step 3: Take Notes as your classmates share out.

Reading 2 Summary Share Out (2019)	Reading 3 Summary Share Out (2023)

Step 4: Drawing Conclusions. Using the note chart in Step 3 and your own summary bullet points from Step 2, write a paragraph on how AI has proven the initial fears and / or how AI has overcome the initial fears expressed in the 3 articles.

Part III: Socratic Seminar.

Step 1: Take notes as you listen to the 3 minute podcast “Tracked and Traced”

Step 2: Use the rubric on the following page to participate in a discussion using the Socratic method. Think about what you have learned about the ethics of AI today as you discuss.

Part IV: Exit Slip: Ethical Concerns.

Write one policy rule based specifically on the information presented to you today. Imagine that you have the power to write a policy to ensure AI is used ethically. Write one policy rule based specifically on the information presented to you today. Include the following information:

Who has to follow this policy?

What will the policy do (or prevent)? How will you ensure this is done?

Write your policy here.

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Consideration of Unexpected Concerns Total Score:	Goes beyond common concerns to delve into unexpected or less-discussed issues related to AI in public education, demonstrating originality and critical thinking.	Briefly mentions some unexpected concerns, but lacks significant exploration or analysis.	Fails to identify or discuss any unexpected concerns, sticking only to mainstream issues.	N/A
Evidence and Research Total Score:	Supports arguments with relevant and credible sources, including research articles, expert opinions, and case studies.	Uses some sources to support arguments, but they may be limited in scope or credibility.	Relies on personal opinions or anecdotal evidence with minimal external support.	Lacks any supporting evidence or relies on unreliable sources.
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Part I: Journaling.

Take 5 minutes to reflect and journal on the following prompt, keeping in mind the things we have covered over the last 2 days.

“State leaders can’t shy away from change, or the technologies that bring it about,” said Kristen Baesler, superintendent of instruction for the North Dakota Department of Public Instruction, in the report. “That’s not an option for the students we serve, whose future success depends on their ability to thrive in an ever-changing, technology-rich world.”

Part II: Jigsaw.

Step 1: Get into a group with the other students who have the reading below (Reading 1).

Step 2: Annotate as you read the article. Then, summarize the article in 3 bullet points in the space below. Be prepared to share out with your classmates.

- There are such things called tech giants; those things and or people are Alphabet, Amazon, Facebook, Stephen Hawking, Elon Musk; etc.
- They are comparing a lot of things to computers, machines, and electronics.
- All of the articles they are talking about AI or something to do with machines.

Top 9 ethical issues in artificial intelligence

By Julia Bossmann, October 2016

Optimizing logistics, detecting fraud, composing art, conducting research, providing translations: intelligent machine systems are transforming our lives for the better. As these systems become more capable, our world becomes more efficient and consequently richer.

Tech giants such as Alphabet, Amazon, Facebook, IBM and Microsoft – as well as individuals like Stephen Hawking and Elon Musk – believe that now is the right time to talk about the nearly boundless landscape of artificial intelligence. In many ways, this is just as much a new frontier for ethics and risk assessment as it is for emerging technology. So which issues and conversations keep AI experts up at night?

1. Unemployment. What happens after the end of jobs?

The hierarchy of labor is concerned primarily with automation. As we've invented ways to automate jobs, we could create room for people to assume more complex roles, moving from the physical work that dominated the pre-industrial globe to the cognitive labor that characterizes strategic and administrative work in our globalized society.

Look at trucking: it currently employs millions of individuals in the United States alone. [★] What will happen to them if the self-driving trucks promised by Tesla's Elon Musk become widely available in the next decade? But on the other hand, if we consider the lower risk of accidents, self-driving trucks seem like an ethical choice. The same scenario could happen to office workers, as well as to the majority of the workforce in developed countries.

This is where we come to the question of how we are going to spend our time. Most people still rely on selling their time to have enough income to sustain themselves and their families. We can only hope that this opportunity will enable people to find meaning in non-labour activities, such as caring for their families, engaging with their communities and learning new ways to contribute to human society.

If we succeed with the transition, one day we might look back and think that it was barbaric that human beings were required to sell the majority of their waking time just to be able to live.

2. Inequality. How do we distribute the wealth created by machines?

[★] Our economic system is based on compensation for contribution to the economy, often assessed using an hourly wage. The majority of companies are still dependent on hourly work when it comes to products and services. But by using artificial intelligence, a company can drastically cut down on relying on the human workforce, and this means that revenues will go to fewer people. [★] Consequently, individuals who have ownership in AI-driven companies will make all the money.

We are already seeing a widening wealth gap, where start-up founders take home a large portion of the economic surplus they create. In 2014, roughly the same revenues were generated by the three biggest companies in Detroit and the three biggest companies in Silicon Valley ... only in Silicon Valley there were 10 times fewer employees.

If we're truly imagining a post-work society, how do we structure a fair post-labour economy?

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This milestone is only the start of an age where we will frequently interact with machines as if they are humans; whether in customer service or sales. While humans are limited in the attention and kindness that they can expend on another person, artificial bots can channel virtually unlimited resources into building relationships.

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On the other hand, maybe we can think of a different use for software, which has already become effective at directing human attention and triggering certain actions. When used right, this could evolve into an opportunity to nudge society towards more beneficial behavior. However, in the wrong hands it could prove detrimental.

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Though artificial intelligence is capable of a speed and capacity of processing that's far beyond that of humans, it cannot always be trusted to be fair and neutral. Google and its parent company Alphabet are one of the leaders when it comes to artificial intelligence, as seen in Google's Photos service, where AI is used to identify people, objects and scenes. But it can go wrong, such as when a camera missed the mark on racial sensitivity, or when a software used to predict future criminals showed bias against black people.

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The more powerful a technology becomes, the more it can be used for nefarious reasons as well as good. This applies not only to robots produced to replace human soldiers, or autonomous weapons, but to ~~AI~~ AI systems that can cause damage if used maliciously. Because these fights won't be fought on the battleground only, cybersecurity will become even more important. After all, we're dealing with a system that is faster and more capable than us by orders of magnitude.

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It's not just adversaries we have to worry about. What if artificial intelligence itself turned against us? This doesn't mean by turning "evil" in the way a human might, or the way AI disasters are depicted in Hollywood movies. Rather, we can imagine an advanced AI system as a "genie in a bottle" that can fulfill wishes, but with terrible unforeseen consequences.

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This poses a serious question about artificial intelligence: will it, one day, have the same advantage over us? We can't rely on just "pulling the plug" either, because a sufficiently advanced machine may anticipate this move and defend itself. This is what some call the "singularity": the point in time when human beings are no longer the most intelligent beings on earth.

Handwritten signature or scribble in the bottom right corner.

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While neuroscientists are still working on unlocking the secrets of conscious experience, we understand more about the basic mechanisms of reward and aversion. We share these mechanisms with even simple animals. In a way, we are building similar mechanisms of reward and aversion in systems of artificial intelligence. For example, reinforcement learning is similar to training a dog: improved performance is reinforced with a virtual reward.

Right now, these systems are fairly superficial, but they are becoming more complex and life-like. Could we consider a system to be suffering when its reward functions give it negative input? What's more, so-called genetic algorithms work by creating many instances of a system at once, of which only the most successful "survive" and combine to form the next generation of instances. This happens over many generations and is a way of improving a system. The unsuccessful instances are deleted. At what point might we consider genetic algorithms a form of mass murder?

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Some ethical questions are about mitigating suffering, some about risking negative outcomes. While we consider these risks, we should also keep in mind that, on the whole, this technological progress means better lives for everyone. Artificial intelligence has vast potential, and its responsible implementation is up to us.

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Write one policy rule based specifically on the information presented to you today. Imagine that you have the power to write a policy to ensure AI is used ethically. Write one policy rule based specifically on the information presented to you today. Include the following information:

Who has to follow this policy?

CREATORS OR AI

What will the policy do (or prevent)? How will you ensure this is done?

NOT give them access to everything. Have everyone install a VPN.

Write your policy here.

Everyone should activate a VPN on their phone to not let AI or companies have

Category	Excellent (4pt)	Good (3 pts)	Fair (2 pts)	Poor (1 pt)
Analysis of Positive Concerns Total Score:	Identifies and articulates well-supported arguments for the positive impact of AI on public education, considering factors like equity, engagement, and teacher workload.	Presents some valid arguments for the positive impact of AI, but lacks comprehensive evidence or analysis.	Offers generic or poorly defined positive impacts of AI without clear explanation or reasoning.	Fails to identify or adequately discuss any positive impacts of AI on public education.
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Part I: Journaling.

Take 5 minutes to reflect and journal on the following prompt, keeping in mind the things we have covered over the last 2 days.

→ Don't be scared of change

"State leaders can't shy away from change, or the technologies that bring it about," said Kristen Baesler, superintendent of instruction for the North Dakota Department of Public Instruction, in the report. "That's not an option for the students we serve, whose future success depends on their ability to thrive in an ever-changing, technology-rich world."

Part II: Jigsaw.

Step 1: Get into a group with the other students who have the reading below (Reading 1).

Step 2: Annotate as you read the article. Then, summarize the article in 3 bullet points in the space below. Be prepared to share out with your classmates.

1. COVID-19 ties into the rapid usage of chat GPT
2. Officials top goal this year is improving the performance of educator & students academics
3. Improving home internet is also a major challenge.

Districts Looking for New Guidance on AI, and Tech Equity, From States
By Emma Kate Fittes, 2023

As the rapid emergence of ChatGPT raises new questions about the power and drawbacks of artificial intelligence, many states are seeing a growing demand from school districts for guidance on the technology's use in the classroom.

But federal and state initiatives around AI are lagging behind the newfound interest, a new survey

finds.

According to the recently released 2023 State EdTech Trends report, 55 percent of the more than 100 state officials surveyed say they see an increasing demand for support or policies around artificial intelligence compared to last year.

Yet only 2 percent of respondents say their state has an AI initiative in place.

“State leaders can’t shy away from change, or the technologies that bring it about,” said Kirsten Baesler, superintendent of public instruction for the North Dakota Department of Public Instruction, in the report, “That’s not an option for the students we serve, whose future success depends on their ability to thrive in an ever-changing, technology-rich world.”

The report, released by nonprofit State Educational Technology Directors Association in collaboration with Whiteboard Advisors, looks at the types of ed-tech policies state education agencies have adopted, and the ongoing technology challenges states face, since schools and society were set back by COVID-19.

Respondents — which include SETDA members, state superintendents, and other senior state officials from all 50 states — laid out the biggest challenges and areas of ongoing need in educational technology, including cybersecurity, access to internet, and funding, in addition to more AI policies.

“This report signifies the uniqueness of this moment in time as school systems emerge from the pandemic into a technology-rich new normal rife with opportunity but also risk,” said Julia Fallon, executive director of SETDA, in a statement.

It’s a much different picture than the organizations’ first trends report painted a year ago. In the fall of 2022, school districts were still transitioning back to fully in-person instruction.

“Last year’s needs have become this year’s priorities,” Fallon said, “and states are making progress in addressing these challenges.”

Cybersecurity, Tech Equity Are Big Concerns

The survey shows that state ed-tech officials’ top priorities this year are improving student academic performance and recruiting and retaining educators as school districts are reckoning with the long-term impacts of the pandemic and federal relief funding that previously bolstered ed-tech purchases comes to an end.

It also captured some progress in addressing cybersecurity threats, a challenge that respondents ranked as their state’s top technology priority.

A year ago, many of the state officials said either their state education agency or at least one school district was targeted by a cyberattack or threat. But few, only 6 percent, said their state provides ample

cybersecurity funding.

In 2023, more state leaders, though still a minority — 19 percent — say they have ample funding for cybersecurity mitigation. At the same time, 42 percent of those surveyed indicated that their state provides a small amount or very little funding for cybersecurity.

“Improving K-12 cybersecurity posture has become an issue of resources and equity,” said Brad Hagg, director of education technology at the Indiana Department of Education, said in the report.

“Under-staffed districts and communities without access to a pipeline of cyber-specialists will struggle to meet the requirements, often dictated by insurance companies, as well as the best practices necessary to implement a strong cybersecurity threat mitigation program.”

Other key takeaways from the report:

- Improving equitable internet access remains one of state officials' top technology challenges. Twenty percent of survey respondents say it's a top priority for their state this year.

Twenty-nine percent of state officials say improving students' home internet access also remains an urgent unmet need, an increase from 18 percent last year.

States appear to have made some progress when it comes to providing professional learning for educators on how to use instructional technology tools. Fewer state officials identified this as a top unmet need in 2023, 17 percent compared to 24 percent in 2022.

Source:

<https://marketbrief.edweek.org/marketplace-k-12/districts-looking-new-guidance-ai-tech-equity-states/?cmp=soc-tw-s-hr-mktbf>

Step 3: Take Notes as your classmates share out.

Reading 1 Summary Share Out (2016)	Reading 2 Summary Share Out (2019)

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Who has to follow this policy?

creators of ai
What will the policy do (or prevent)? How will you ensure this is done?

ensure that AI is properly used to better society

Write your policy here.

AI does not have the right to use its ability to pretend to be someone else or use others information.

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- Schools are looking for some guidance from the state on AI and technology to make sure everyone's included and treated right.
- They wanna find that balance between being innovative and making sure everyone's privacy and fairness is protected.
- The states needs to step up and lay down some rules so schools can navigate this ever-changing world of technology.

Districts Looking for New Guidance on AI, and Tech Equity, From States

By Emma Kate Fittes, 2023

As the rapid emergence of ChatGPT raises new questions about the power and drawbacks of artificial intelligence, many states are seeing a growing demand from school districts for guidance on the technology's use in the classroom.

But federal and state initiatives around AI are lagging behind the newfound interest, a new survey

finds.

According to the recently released 2023 State EdTech Trends report, 55 percent of the more than 100 state officials surveyed say they see an increasing demand for support or policies around artificial intelligence compared to last year.

Yet only 2 percent of respondents say their state has an AI initiative in place.

“State leaders can't shy away from change, or the technologies that bring it about,” said Kirsten Baesler, superintendent of public instruction for the North Dakota Department of Public Instruction, in the report, “That's not an option for the students we serve, whose future success depends on their ability to thrive in an ever-changing, technology-rich world.”

The report, released by nonprofit State Educational Technology Directors Association in collaboration with Whiteboard Advisors, looks at the types of ed-tech policies state education agencies have adopted, and the ongoing technology challenges states face, since schools and society were set back by COVID-19.

Respondents — which include SETDA members, state superintendents, and other senior state officials from all 50 states — laid out the biggest challenges and areas of ongoing need in educational technology, including cybersecurity, access to internet, and funding, in addition to more AI policies.

“This report signifies the uniqueness of this moment in time as school systems emerge from the pandemic into a technology-rich new normal rife with opportunity but also risk,” said Julia Fallon, executive director of SETDA, in a statement.

It's a much different picture than the organizations' first trends report painted a year ago. In the fall of 2022, school districts were still transitioning back to fully in-person instruction.

“Last year's needs have become this year's priorities,” Fallon said, “and states are making progress in addressing these challenges.”

Cybersecurity, Tech Equity Are Big Concerns

The survey shows that state ed-tech officials' top priorities this year are improving student academic performance and recruiting and retaining educators as school districts are reckoning with the long-term impacts of the pandemic and federal relief funding that previously bolstered ed-tech purchases comes to an end.

It also captured some progress in addressing cybersecurity threats, a challenge that respondents ranked as their state's top technology priority.

A year ago, many of the state officials said either their state education agency or at least one school district was targeted by a cyberattack or threat. But few, only 6 percent, said their state provides ample

cybersecurity funding.

In 2023, more state leaders, though still a minority — 19 percent — say they have ample funding for cybersecurity mitigation. At the same time, 42 percent of those surveyed indicated that their state provides a small amount or very little funding for cybersecurity.

“Improving K-12 cybersecurity posture has become an issue of resources and equity,” said Brad Hagg, director of education technology at the Indiana Department of Education, said in the report.

“Under-staffed districts and communities without access to a pipeline of cyber-specialists will struggle to meet the requirements, often dictated by insurance companies, as well as the best practices necessary to implement a strong cybersecurity threat mitigation program.”

Other key takeaways from the report:

Improving equitable internet access remains one of state officials' top technology challenges. Twenty percent of survey respondents say it's a top priority for their state this year.

Twenty-nine percent of state officials say improving students' home internet access also remains an urgent unmet need, an increase from 18 percent last year.

States appear to have made some progress when it comes to providing professional learning for educators on how to use instructional technology tools. Fewer state officials identified this as a top unmet need in 2023, 17 percent compared to 24 percent in 2022.

Source:

<https://marketbrief.edweek.org/marketplace-k-12/districts-looking-new-guidance-ai-tech-equity-states/?cmp=soc-tw-s-hr-mktbf>

Step 3: Take Notes as your classmates share out.

Reading 1 Summary Share Out (2016)	Reading 2 Summary Share Out (2019)

Step 4: Drawing Conclusions. Using the note chart in Step 3 and your own summary bullet points from Step 2, write a paragraph on how AI has proven the initial fears and / or how AI has overcome the initial fears expressed in the 3 articles.

Part III: Socratic Seminar.

Step 1: Take notes as you listen to the 3 minute podcast "Tracked and Traced"

Step 2: Use the rubric on the following page to participate in a discussion using the Socratic method. Think about what you have learned about the ethics of AI today as you discuss.

Part IV: Exit Slip: Ethical Concerns.

Write one policy rule based specifically on the information presented to you today. Imagine that you have the power to write a policy to ensure AI is used ethically. Write one policy rule based specifically on the information presented to you today. Include the following information:

Who has to follow this policy?

What will the policy do (or prevent)? How will you ensure this is done?

Write your policy here.

Category	Excellent (4pt)	Good (3 pts)	Fair (2 pts)	Poor (1 pt)
Analysis of Positive Concerns Total Score:	Identifies and articulates well-supported arguments for the positive impact of AI on public education, considering factors like equity, engagement, and teacher workload.	Presents some valid arguments for the positive impact of AI, but lacks comprehensive evidence or analysis.	Offers generic or poorly defined positive impacts of AI without clear explanation or reasoning.	Fails to identify or adequately discuss any positive impacts of AI on public education.
Analysis of Negative Concerns Total Score:	Identifies and critically analyzes a range of potential negative impacts of AI in public education, including bias, data privacy, and job displacement.	Presents some potential negative impacts of AI, but lacks thorough analysis or supporting evidence.	Identifies one or two negative impacts of AI without clear explanation or critical thinking.	Ignores or downplays potential negative impacts of AI on public education.
Consideration of Unexpected Concerns Total Score:	Goes beyond common concerns to delve into unexpected or less-discussed issues related to AI in public education, demonstrating originality and critical thinking.	Briefly mentions some unexpected concerns, but lacks significant exploration or analysis.	Fails to identify or discuss any unexpected concerns, sticking only to mainstream issues.	N/A
Evidence and Research Total Score:	Supports arguments with relevant and credible sources, including research articles, expert opinions, and case studies.	Uses some sources to support arguments, but they may be limited in scope or credibility.	Relies on personal opinions or anecdotal evidence with minimal external support.	Lacks any supporting evidence or relies on unreliable sources.
Argument Clarity and Organization Total Score:	Presents arguments in a clear, concise, and well-organized manner, demonstrating effective use of logic and transitions.	Arguments are generally clear and organized, but may lack some sophistication or flow.	Arguments are poorly organized or confusing, making it difficult to follow the reasoning.	Arguments are unclear, illogical, or poorly structured.
Presentation & Engagement Total Score:	Delivers the presentation with confidence and clarity, effectively engaging the audience through visuals, questions, and interactive elements.	Presents the information in a clear and engaging manner, but may lack some polish or audience interaction.	Presentation is hesitant, disorganized, or lacks engagement with the audience.	Delivers the presentation poorly or fails to meaningfully engage the audience.

