Ethical Issues: Discussion Posts

# Find a Fellow Student Online

**What did you find out about a fellow student online? Were there any associated ethical issues?**

I don’t know the other students since I am taking this course online, so I decided to see what I could find out about my husband. He has a very common first and last name and his information was made more difficult to find by the fact that there are some (unrelated) famous people with his name. I began by typing his name and the city we live in. It actually brought up his LinkedIn fairly quickly, which might be because we are connected on that platform. Nevertheless, there was nothing concerning there other than a profile photo that’s a bit too old.

After further digging, I was able to find our home address and saw websites that would allow you to pay for more contact information. I didn’t pay for the deeper look, but I was able to see that, while some of the information posted was incorrect, a lot of it was correct. It is concerning to me that you can find someone’s address so quickly. It also included names of people close to him including his parents, sister, and myself. These people are much more likely to be findable and have more information on him available to the public due to less common names, smaller cities, and more activity on social media. While my husband is not particularly active on social media, it is easy to find more on him than what he himself puts out there because of those who know him that are active.

Overall, there were not overt ethical issues on his part. The things he has put out there are strictly professional. However, I have seen ethical issues in the connection of people on the internet and quick access to information they may not want out there for the public. It seems very easy to stalk someone with this information because you now know where they live and work and can even pay to get their phone number, which would likely provide access to even more information. After taking the cybersecurity course, it seems that targeting a specific person would be pretty easy, which is concerning to say the least.

# Analyze a Case Study

**Choose a case study from the ones provided with the ACM Code of Professional Ethics, at** [**https://www.acm.org/code-of-ethics/case-studies**](https://www.acm.org/code-of-ethics/case-studies)**.   Write and post (on the discussion board) an essay of 500-800 words that:**

* **Briefly analyzes this case from the perspectives of each of the ethical frameworks we have studied: Kantianism/Deontology; Virtue Ethics; Utilitarianism.   For each, do you feel that framework suggests whether the situation is ethical or not?  Or do you feel it does not lead to a conclusive determination?   Whichever you feel (ethical / inconclusive / not-ethical) please state briefly what you feel that framework leads to that conclusion.**
* **From what you have seen so far, which ethical frameworks appeal to you most, and least, and why?**

*Case Study: Automated Active Response Weaponry*

*Q Industries is an international defense contractor that specializes in autonomous vehicles. Q’s early work focused on passive systems, such as bomb-defusing robots and crowd-monitoring drones. As an early pioneer in this area, Q established itself as a vendor of choice for both military and law enforcement applications. Q’s products have been deployed in a variety of settings, including conflict zones and non-violent protests.*

*In recent years, Q has suffered a number of losses, as protestors and other individuals have physically attacked the vehicles with rocks, guns, and other weapons. To reduce this problem, Q has begun to experiment with automated active responses. Q’s first approach was to employ facial recognition algorithms to record those present and to detect individuals who may pose a threat. This approach was shortly followed by automated non-lethal responses, such as tear gas, pepper spray, or acoustic weapons, to incapacitate threatening individuals.*

*Q has recently been approached—in secret meetings—by multiple governments to expand this response to include lethal responses of varying scales. These capabilities range from targeted shooting of known individuals to releasing small-scale explosives. When Q leadership agreed to pursue these capabilities, several of Q’s original engineers resigned in protest. Some of these engineers had previously expressed concern that the non-lethal responses had inadequate protections against tampering, such as replacing tear gas with a lethal poison. Knowing that these individuals were planning to speak out publicly, Q sued them for violating the terms of their confidentiality employment agreement.*

Deontology relies on universal moral laws that are based on reason, making duty and intent of the utmost importance. Furthermore, all humans are inherently equal and should be treated as an end, not the means to an end. Essentially, deontology can be summed up with the “golden rule.” In this case study, Q Industries would undeniably be condemned by Kant and his followers. For one, Kantian ethics reject killing people and would certainly look down upon using violent methods of changing human behavior. Second, Q’s lawsuit against the employees that planned to speak out publicly inherently places the needs of the company, a non-human entity, over those of the humans, which are being supported by the former employees.

While deontology is fairly cut and dry in this case, it does not actually address the widespread concerns over facial recognition. Privacy is not clearly defined as a universal moral law or not because different people and different cultures prioritize it (or not) to different extents. As a result, Kantianism cannot make judgements on the technology itself, only on the resultant actions taken from the data it gathers.

Virtue theory is provides less obvious answers to the ethics of the scenario. While virtue theory places the most importance on having virtuous qualities rather than useful results or following some set of rules, it doesn’t account for changes in what is considered virtuous overtime. If you think justice or even revenge are more virtuous than mercy, then perhaps Q’s technology would not be considered unethical from this perspective. On the other hand, the drones are attacking people who have not actually done anything, at least not yet. If the injustice has not taken place yet, is it possible to deal out justice? My intuition tells me that virtue theory, like deontology, would end up condemning Q’s technology. However, it is not as short a debate.

Privacy is not typically thought of as a virtue, so again, we find ourselves judging the ethics of the case study through a lens that does not address one of cybersecurity’s biggest concerns. Part of the reason that the last two ethics theories are not as useful in a scenario such as this, is that they were created in a pre-modern era when virtues were only discussed as something humans could hold. There was little to no room for non-human entities to have virtues. Indeed, even cities in ancient Greece, where virtue ethics was born, were called by the name of the people as if the city and the people were the same entity, inseparable.

Utilitarianism was founded with more kinds of entities in mind than just humans. Keeping an eye on the greater good over individualism, it emphasizes the importance of the end over the means. With this view in mind, Q’s drones would not be considered unethical due to the result of keeping more people safe by eliminating threats before they occur. Any action that would threaten the greater good, in this instance public safety, including the public discussion of such technologies by former employees would be considered unethical.

The problem with this perspective, other than the potential for killing or harming innocent people, is that it weighs short term benefits more than the costs. For instance, it only stops the potential for an individual or a small group of people to do something violent. It does not address the reasons for the protests in the first place, nor does it consider the possibility of more protests and increased violence in reaction to the harm done in the initial protest.

This case study is better addressed by the social contract theory, which balances the rights of individuals with the security and benefits that governments can provide. In the United States, our constitution acts as a social contract which can be ammended and change over time. If the people agree that security is more important than privacy or an individual’s life, then Q’s actions would be considered ethical. If Q Industries was an American company today, it would be considered unethical in that it punishes people who have not yet committed a crime, robbing of both the chance to not commit a crime and due process if they do.

While Kantianism appeals to me on a human level, it breaks down at larger scales. Therefore, social contract theory can be helpful in translating Kantian ideals into wider society and non-human actions.

# Recommender Systems

**Select one ethical framework (your choice) and write on the discussion board whether you think this framework supports or does not support the use of recommender systems to feed you more YouTube content (songs) and with that, more advertisements.   If you prefer to comment on the case where recommender systems suggest political content as discussed by Tufecki, rather than on musical content that is fine too.**

Through deontology, we can conclude that the using recommender systems to feed you more songs and thus more advertisements is not ethical. This is because the recommender system is using the human viewer as a means to an end. In other words, the goal is advertising, not enriching the users’ lives with more music or useful videos. This remains true for increasingly extremist political content recommendations as the well-being of the individual is literally being sacrificed for the goal of increasing profits.

# The Right to Be Forgotten

**Comment on the following in the discussion board:**

* **Do you feel there should be a Right to be Forgotten in your current nation of residence?**
* **Do you think this policy should be universal, or vary in different countries / regions?**
* **What is the basis for your opinion?  (Ethical framework we’ve studied, or something else)**

I think there should be a right to be forgotten in the United States. The basis of my opinion for this is deontology. Through this ethical lens, humans are all equal and we should essentially treat each other how we ourselves would like to be treated. In this sense, most people would not like the mistakes or simply embarassments of their youth to be made known until the end of time. Furthermore, information about past states of your affairs (financial, personal, or otherwise) is not necessarily relevant to current matters but could result in discrimination. In conclusion, unless the safety of the public is a concern, the right to be forgotten has deontological standing.

# Report #1

**Write a report of 500-800 words that includes:**

* **The reference information for the article (title, author, where and when published, link if online)**
* **A summary of the content of the article**
* **The issue(s) in data ethics that this article is relevant to**
* **Your assessment of whether the issues discussed in the article are being handled and resolved properly, and what additional steps you feel should be considered.  Please refer to at least one ethical framework in making this assessment**

McCue, TJ. (2019). “Alexa Is Listening All the Time: Here’s How to Stop It.” *Forbes*. <https://www.forbes.com/sites/tjmccue/2019/04/19/alexa-is-listening-all-the-time-heres-how-to-stop-it/>.

McCue expertly navigates readers through the settings of the Alexa app on how to turn off sharing your Echo data with Amazon. He even adds some cues for users that have Google Home and Apple HomePod. McCue recognizes that completely unplugging is difficult in the modern age, especially with cellular devices in all our pockets. However, he recommends another DIY hack for stopping Alexa and other listening devices from hearing and recording any given conversation in your home. This hack is essentially building a white noise machine that can only be turned off with a spoken command. Otherwise, it is supposed to block other devices from capturing human language in a distinguishable way. McCue also notes that there are starting to be some white noise devices of this kind on the market as well. Considering that this piece was written in 2019, there are likely many now.

Finally, it is necessary to note that the entire basis of needing instructions like these was the news that Amazon was paying thousands of workers across the globe to listen to recordings from Echo Dots. The purported reason for this was to have humans identify human language, transcribe it, and feed it back into the system so that Alexa could learn to identify speech better and improve its usability. Of course, this practice can also raise serious concerns.

The main ethical concern of the article was the capture and use of conversations that were not meant for Alexa’s use. However, I would also like to add another ethical concern, which is the capture, use, and (most importantly) lack of deletion of user data. Using data that you have not been given express permission to use, and similarly capturing personal data that your device was not supposed to capture, is a violation of privacy. At least in the United States, we highly value personal privacy. This is even written into our bill of rights in several places, including the first and fourth amendments protecting rights to assembly and against unwarranted searches. No matter the ethical framework, whether that be deontology, social contract theory, or virtue ethics, this invasion of privacy, or even the potential for it, would be considered unethical. Even utilitarianism could view it as unethical when considering there are other ways of training Alexa’s speech capabilities.

Because the article is about six years old, I was curious whether these issues had been addressed by the company. I have an Echo Dot in my own home, a graduation present from my mother-in-law, that we use mainly for keeping our grocery list. The settings and app navigation have changed significantly since the article was written so I had to do a bit of searching on my own. Through this investigation I found two things: (1) Amazon has still kept the default data sharing setting on, and (2) I could view everything Alexa had captured about my husband and I since we first took it out of the box and plugged it in.

This was disappointing because, not only had the company continued to take advantage of those of us who hastily added devices to our homes without taking the time to think about the security and privacy risks, it also was making us more vulnerable to privacy concerns by storing unnecessary data for extended periods of time. This was easily remedied by changing the data settings to not store any information it grabbed and deleting the history it already stored. However, it is still a problem that the default is to capture and keep everything, especially because it is completely unnecessary for both the user and the company providing the service.

# Comment on Two Articles

**Comment on two of the articles that were discussed in this lesson and that you have read carefully. For each, say in 1-2 paragraphs:**

* **Which article you are referring to**
* **What you found most compelling or striking about the article**
* **What you feel is the key ethical issue illustrated by the article**

**Then read at least two article summaries written by other students and add a comment to each of them.**

In Susan Fowler’s “Reflecting on One Very, Very Strange Year at Uber,” I was not shocked at the proposition that was made to her by her manager (though doing so on her first day was a bit striking). However, I was shocked by the systematic protection this individual received (although this does explain why he felt bold enough to make a proposition on day one). It is shocking because it is not even ethical in a utilitarian sense. Protecting an individual “high performer” over keeping multiple employees who might’ve been “high performers,” of which we know Fowler was, does not add up. Therefore, Fowler’s experience is particularly disturbing. The employees and leaders at Uber sacrificed their own company on the altar of patriarchy for absolutely no gain.

The second article of interest to me was *The Guardian*’s expose of a study conducted on GitHub that revealed that code written by women was more likely to be included in projects if their gender was not known, and less likely to be included if their gender was known. This was striking to me as I realized that even I, a woman, am not necessarily safe from making biased judgements unconsciously about people just like me. This consideration of unconscious bias is interesting in that you’re not even aware you may be acting unethically when you are doing it. However, we are not powerless against our unconscious biases. The ethical thing to do once we realize this is an issue, as this article made clear, is be actively aware of what our biases might be and take this into consideration when making decisions about whose work or thoughts to include in a project.

# Report #2

**Write a report of 500-800 words that includes:**

* **The reference information for the article (title, author, where and when published, link if online)**
* **A summary of the content of the article**
* **The issue(s) in data ethics that this article is relevant to**
* **Your assessment of whether the issues discussed in the article are being handled and resolved properly, and what additional steps you feel should be considered.  Please refer to at least one ethical framework in making this assessment**

Stetler, C. (2024). “AI Algorithms Used in Healthcare Can Perpetuate Bias.” *Rutgers Newark*. <https://www.newark.rutgers.edu/news/ai-algorithms-used-healthcare-can-perpetuate-bias>.

This article highlights a study conducted by Fay Cobb Payton, Thelma C. Hurd, and Darryl B. Hood that looked at the different ways in which AI applications in healthcare perpetuate the more well-known biases of human practitioners. Black and Latino patients are more likely to suffer from certain diseases and have higher levels of severity for some. The decisions that human doctors have made regarding their cases have been shown to have bias against taking their concerns and lifestyle limitations seriously, continuing to worsen their medical experiences and overall health. AI was introduced as a method of reducing this human bias in patient care. However, this new study finds that it often continues the biases that we see in human physicians’ decisions.

The authors argue that AI can still be a useful tool for healthcare providers, but it needs some serious safeguards put into place. For instance, more representation in both medical professionals as well as technology experts can help mitigate these biases. Furthermore, retraining these algorithms on data that is better protected from biases and accounts for a wider range of experiences may help. Additionally, the authors note that humans should always be in the loop on these processes and decisions.

I find there is one ethical issue that is particularly interesting in this conundrum. I agree with the general treatments the authors recommended for fixing the issue. However, the devil is in the details. Many of these healthcare AIs attempt to deal with race-based biases by simply not including that information in the data so as to solely treat symptoms. On the other hand, this article spends a large portion of time discussing how the algorithms cannot take into account the worse outcomes for Black and Latino patients, the increased difficulties some patients may have with simply coming into the doctor’s office due to lack of access to transportation, or costs of different treatment options and what may be best for any given individual.

This is ethically relevant because there is no clear path ahead. Is it better to keep the potential for human biases in training data, and therefore algorithm decisions, for the purpose of maintaining full relevant information for a patients’ case, or is it better to keep the algorithm ‘color-blind’ and potentially treat illnesses in ways that are not effective for a given individual? Do we include a utilitarian approach and go simply based on which method currently reduces the most mortality and severe illness or do we pick the evil we know, human decisions, rather than a mysterious algorithm and rely on individual applications of virtue ethics?

Overall, I think the situation is being handled ethically. Improving algorithms is always an option and more applicable on a broader scale than trying to address thousands of doctors’ subconscious biases. The other reason I think this is being handled well is that the authors acknowledge that humans should always be a part of providing healthcare choices. The best scenario to me is an algorithm that can help diagnoses and provide treatment options that then the doctor and patient can have an honest conversation about. This seems to be a hybrid approach of utilitarian and virtue ethics.

# Facial Recognition

**Provide an answer of 1-2 paragraphs (or more if you want and feel that is needed) to each of these questions:**

1. **Given the current imperfect but improving state of facial recognition software, where (if at all) do you think it should and/or should not be used?**
2. **Suppose facial recognition improved to a point where identifications are nearly flawless.   Then, where (if at all) do you think it should and/or should not be used?**

**In answering each question, please consider at least two potential uses of facial recognition, such as police identification of people sought for questioning, government identification of suspected potential terrorists, or perhaps more benign applications like professors taking attendance in large lectures.**

I am unsure if there are any uses for facial recognition that should be used on the public. I strongly agree that the use of facial recognition is a violation of privacy in the way that taking someone’s fingerprints would be. I can only think of two use cases for facial recognition software that would not be a violation of privacy. The first is to track prisoners inside a facility. This is because prisoners have essentially forfeited their right to privacy by being convicted of a crime and serving time. The second is for research purposes in historical archives. This does not feel like an invasion of privacy because these individuals are no longer alive, and their materials have likely been donated by a descendant for the purposes of research.

If facial recognition was improved to the point of virtually zero mislabels, I’m not sure it would change my answer to the previous question. The idea of catching known terrorists or using facial recognition to take attendance for class sounds nice in theory. However, America was largely built on the idea of personal privacy and wariness of tyranny. The kinds of information that would be incidentally captured through more noble or even mundane uses of facial recognition seems too high a price to pay for efficiency of tasks already being successfully conducted.

# Gene Editing and Neurological Interventions

1. **Under what conditions do you think it is ok to change the capabilities of a human being via gene editing and/or neurological intervention?   E.g. diseases that significantly impact the length and quality of life? Conditions that make certain people less physically or mentally capable than others?   Creating AI-enhanced superhumans, if we ever can?    What is the basis for your opinion (can be anything that is meaningful to you)?**
2. **For these interventions to progress and succeed, significant involvement from data scientists will be required.   What do you think the stance of the data science community should be with respect to doing such work?   This could include whether or not, or under what conditions, you think data scientists should work on these problems; what obligations you feel the data science community has to be part of the broader ethical discussion on these topics; or other aspects that you feel are important.**

I believe that gene editing in humans should have two conditions: (1) the individual themself must be capable and allowed to make this decision and (2) the changes should only be ones that combat existing diseases or illnesses in the individual at hand. This is, of course, under the assumption that these edits have been thoroughly studied in non-humans before moving to humans. I strongly disagree with the idea of “enhancing” humans through gene editing in any way, shape, or form. In fact, I am inclined to support a hard line against gene editing in humans at all due to the unbounded risks of this technology. (The movie GATTACA and horrific historic genocides such as the Holocaust come to mind.) However, I cannot help but see the world of difference it would make for those who suffer chronic and/or degenerative illnesses. In this case, if it is possible to heal the sick, is it not in fact our responsibility to at least give them the option?

If the data science community has any role in participating in the ethical decisions of these technologies, it would be pushing for regulations and limitations as soon as possible. Preferably, these regulations would be in place before the technology was fully capable and put into the public sector. These limitations should be clearly outlined on the state and international levels with significant repercussions for anyone, doctors, data scientists, patients, and the like, that use these tools for reasons outside of what is codified. Furthermore, data scientists need to be aware of how the technology that they are developing will be used, think through the other uses it could have (good or bad), and refuse to continue work if any ethical issues surrounding the project are not dealt with.

# The Future of Work

**Provide an answer of 1-2 paragraphs to at least two of the following questions:**

1. **Do the people or organizations that are behind the changes which cause jobs to disappear have an obligation to help the people who lose jobs?**
2. **Who has an obligation to help people retrain – governments, companies, …?**
3. **In times of rapid job dislocations, do governments or past employers have an obligation to provide greater safety nets for people who lose jobs?**
4. **Will we enter a world where there is sufficient wealth for all but not sufficient work for all – and if so, should society provide a guaranteed basic income for all?**

I do not think the individuals or organizations that are creating technologies that replace human jobs have an obligation to the people who are affected by these changes. If there is an entity that has this obligation, it is the government. However, it may be in the best interest of the businesses creating this technology to consider doing so. Disregarding the inevitable PR bonus, training recently unemployed individuals how to do new jobs for your own company would be beneficial for both as the individuals may find new employment quickly, and the company will not struggle to find new skillsets that may not be widely found during this transition. Furthermore, it would instill company loyalty and reduce HR costs from high turnover.