# Public transport patrolling


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**Task 1: (Virtue Ethics)**

As an attempt to cope with the long-persisted society vices in public places, Public Transport Victoria (PTV) and Victorian Police force (VP) has proposed a collaboration project, which in detail is a location - recommendation system for the police to patrol.

The happiness and ease of mind of the passengers when travel or overall, the citizens in the city will likely be boost with the application of the system (Camacho-Collados and Liberatore, 2015). Thanks to the use and application of advanced technology, it will work tirelessly at its maximum possible effort, with the report of the citizen being analyzed, the system will recommend the places that need to be patrol to the VP. Once those places were patrolled, the harassing, theft, would be reduced, allow everyone to travel without any worry about those vice actions. Furthermore, this system itself is fair and justifies to everybody, benefits not any individual or group, but everyone as equal as each other.

A safe enough working mechanism and fair “mind” is guaranteed with this recommendation system approach. As it will only use the reported data and recommend the police officers the location to patrol, instead of participating directly in the real world in certain ways, hence, it is a mostly safe mechanism at this moment. In addition to that, it provides a huge fairness advantage over human recommendation making, due to the bias that humans could make due to personal reasons - vices: favoritism, selfishness, recklessness, etc. For example, if a person is to make the recommendation, he might only recommend a particular suburb, because he favors that place, and he would want

to have the police officer available there as much as possible to make it more safety while neglecting all other suburbs' safety. In a different scenario, he might want to damage a suburb's reputation by making the police patrol it frequently, to make people believe that the particular suburb is dangerous. Another huge plus for it is that, unlike a human being, the system does not hold any prejudice or bias against any race, gender, religion, etc. and people in the city will be treated equally. In another case, the police officers can be unlikely to patrol some area, if they can choose which one, again, with similar reasons, a human can be easily manipulated, influenced, and it is hard to identify that dishonest action until it has been done and even consume much more time, effort, tax money to investigate that, which is an intolerance wasted. As such, the application of the recommendation system, in this case, can be considered a "game-changer" in the fight against social vices in a public era.

The system will do its job while preserving the privacy of each individual (Araujo, et al., 2020). Any recommendation system will likely consume a huge amount of data to make the decision, and the quality of the data is paramount important in this kind of system, and with the data from VP and PTV, which is likely to be double-checked and well preserved, the system is most likely to do it function by giving the accurate recommendation. Regard the privacy matter, because the current recommendation systems lack a "perspective" of the human mind, which means it will not "just" tell any individual personal information to somebody or some other systems randomly without command to do so, as opposed to the human's flaw which is talkative, or disloyal, dishonest. Also, it will not think bad of someone because he/she committed the crime and get reported or was the victim in the sexual harassment incident, thus it is resilient and just. Another worth mentioning point is that the recommendation system – which is part of the Artificial Intelligence (AI) field, and the AI nowadays is still a narrow one, so there will be never the case, that the recommendation system would do something else other than recommending patrol location.

Overall, this is indeed a worth praising, justice, courageous action to be taken, because the fight against evil can only be won if actions are made, despite the failures

should it happened, follow up attempts must be pursued and adapted, adjusting continuously, resilience.

**Task 2: (Ethics of Care)**

With the proposed of a recommendation system for the police to patrol, from Public Transport Victoria (PTV) and Victorian Police force (VP). Despite its functionalities and initial results that could bring, still there are many underlying issues and long-term risks that will impact everybody, from the victims, polices other passengers, and even the convicts.

It harms privacy (Michelfelder, 2010) and with long and persisted ill-affected to everyone, especially the person who committed the crime of harassment – or the convict, and the victim. As the system will consume the reported data of the incidents and can only after that could it make the recommendation, so there is no way to evade the fact that the private information of individuals – victims to be read and used, at worst, the victim report that incident without the knowledge that his/her information would later be used and it would continue to be persisted, there could be the case that even the victim does not consensus for his/her data to be used, as such, a serious violation in privacy (Véliz, 2020). More important, in the event of these misfortunes, misuse of data and misconduct to happen, who will be taking the responsibility and who will be the one to fix it, and are they even have the capable power to do so, after that serious damage? The VP? PTV? Or the system? Furthermore, it is a piece of extremely sensitive information, as it is related to sexual harassment or violence, the victim has a high probability of getting hurt if that data is being exposed, and as of now, no mechanism or protection regarding how those data have been proposed or assured. Also, in a shortcoming moment, a crime from a certain person can happen and he/she became a convict, but that does not mean he should be found guilty for the rest of his life, depends on the context of the crime. Yet with the computer system, it just does not forget or forgive like human nature does, as such, could completely shut the door for the

convict or criminal to repents. Hence, it is likely impossible for the system to work without sacrifice the privacy of everyone, but even when it worked, the ill effect and risk happened and is persisted, long-lasting, interfere with the selection and hurt the vulnerable (Kincaid, 2013), two wrong does not make one right.

The proposed system does not have a safety mechanism against fraud or fake reports, or how to prevent them from being misused. Until now, the PTV and VP have not demonstrated that they could successfully filter out fault/fake/scam reports from real ones, as such, based on “wrong” data. Another worth mentioned point is that the system can also be very biased, as the reported data is unbalanced, “Women passengers report a significantly higher rate of harassment than men passengers. While men report a slightly higher rate of theft and violence against them, women report more than three times the rate of sexual harassment”, certain reports have pointed out that men are unlikely to report the harassment due to pride and humiliation (Brown, 2021). Hence, it will likely produce the wrong recommendation or in short “Garbage In Garbage Out” (R. Stuart Geiger, et al., 2020). By that, resulting in the damage of certain suburbs’ reputation, damage their business as people would not travel there since police patrol there with high frequency than other suburbs. So, the system has failed to provide the reasons that it would work according to the trust of the people.

Another critical uncertainty of the system is that how it will be performed, calculated the recommendation or algorithm, has not been presented by either the PTV and VP, which makes it is very limited in terms of transparency. Furthermore, there is no guarantee that certain algorithms that succeed in some datasets, laboratory, or even conferences could work with the real world, complex situation, specific cities, as such, it could bring out unwanted effect to the victims, their loved ones, the suburbs, or anyone related to that place.

In order for any digital system to work smoothly, it would require decent hardware, infrastructure, thus, put more pressure on the tax, affected the people with low wages. Aside from that, the increased consumption of energy (Jones, 2018), natural resources, harming the environment, resulting in the rise of sea level, harming all

coastal cities in the world – including Melbourne, and people from every one of those countries, especially the poor one with limited capability to relocate.

In conclusion, in spite of certain results and benefits the system could bring, there is a huge number of serious problems and effect that it could bring, worse of all, those effects would be persisted and long-lasting, while its impact is hard to repair or mitigate, and it affects not just our society in term of moral, ethics, but the environment, natural resources as well.

## References

Araujo, Theo ; Helberger, Natali ; Kruikemeier, Sanne & de Vreese, Claes H., 2020. In AI we trust? Perceptions about automated decision-making by artificial intelligence. _AI and Society_ 35 (3):611-623.

Brown, E., 2021. *Sexual Assault Against Boys Is a Crisis.* [Online]
Available at: https://www.washingtonpost.com/magazine/2021/02/22/why-we-dont-talk-about-sexual-violence-against-boys-why-we-should/

Camacho-Collados, M. and Liberatore, F., 2015. A Decision Support System for predictive police patrolling. Decision Support Systems, 75, pp.25-37.

Hursthouse, R. & Pettigrove, G., 2016. *Virtue Ethics.* [Online]
Available at: https://plato.stanford.edu/entries/ethics-virtue/

Jones, N., 2018. *How to stop data centres from gobbling up the world's electricity.* [Online]
Available at: https://www.nature.com/articles/d41586-018-06610-y

Kincaid, A., 2013. *Japan Powered.* [Online]
Available at: https://japanpowered.com/folklore-and-urban-legends/heikegani-the-samurai-crab

Michelfelder, Diane P., 2010. Philosophy, privacy, and pervasive computing. _AI and Society_ 25 (1):61-70.

Norlock, K., 2019. *Feminist Ethics.* [Online]
Available at: https://plato.stanford.edu/entries/feminism-ethics/

R. Stuart Geiger, et al., 2020. *Garbage in, garbage out?: do machine learning application papers in social computing report where human-labeled training data comes from?.* New York, Association for Computing Machinery.

Véliz, Carissa (2020). Data, Privacy, and the Individual. _Center for the Governance of Change_.