

ARE WE READY FOR AN AI-BASED MINORITY REPORT?

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1. INTRODUCTION

In the book *Minority Report*, by Philip K Dick, the city police department uses a group of psychics to read the minds of the population. This allows the police to predict where, and when a crime will be committed by someone, which hence leads to a vast reduction in crime for the city, as the police could arrive before the crime, instead of after. Of course this raises some ethical issues, as well as some political issues, which will be covered below.

While we don't currently have such psychics, we have an awful lot of data, and a vast amount of processing power, so what's to say we can't use that data, and AI, to do the jobs of the psychics. In this essay we will explore the viability of this, as well as the problems that could arise.

2. THE PROBLEM

According to the ONS, the levels of crime have been increasing over the past 5 years [5], which can be put down to many reasons, such as a general increase in population. We have also seen a continuous decrease in the number of police officers, up until 2019 [4]. This would very likely contribute to the increase in crime too, so clearly more has to be done to stop it.

3. THE SOLUTION

One method to fix this could be to predict crime before it happens. While we don't have the Precogs from *Minority Report*, we do have very powerful artificial

intelligence, which is already on its way to predicting some crimes.

Take Fraud for instance, there are more and more ways to commit fraud, but it is also detectable, and preventable given the correct resources. If we collected all the financial data, and purchasing history of those who have been proven guilty for committing a certain fraud, such as Credit Card fraud, we could then monitor everyone's shopping trends and spending habits and compare them to the historical data. If this data starts to line up, then we could make the suggestion that said person is about to commit such fraud.

Another crime that could be predicted is violent crime. While this is more difficult, as it requires monitoring physical environments, it is doable, especially with increased monitoring of the population. Almost everyone carries a smartphone with them, which can track location, and record sound, we also have extensive CCTV systems in built up places, both of these could be used to predict future crimes. This would be done by spotting behavioural changes in people, and comparing it to the behavioural changes in convicted criminals before they committed their respective crime.

All of this analysis would require a huge amount of data, and processing power, so one method to gain this power is to use the personal devices of the people themselves to process the data. Many phones now have the power to run complex machine learning algorithms on board, and so, if each person's phone monitored them and their activities, it could predict the crime, and report it, before it even happened. This would be an already available resource to take the place of the Precogs in Minority Report, which don't yet exist.

4. WHY SHOULD WE DO THIS?

There are some compelling reasons for the system mentioned above. The main one being that the amount spent on human police resources would be able to be decreased, as fewer police officers would be required to man the streets, or patrol. They would only need to respond to a pre-crime, and hence, more money could be spent on community support, and initiatives to help create jobs and opportunities in an area.

However, this is may be undermined by existing crime gangs, who could become even more prominent, as they have existing resources to figure out how to get around the prediction system, or may be able to "buy" their way into the local community support in order to exert more power onto the local community. This could be a dangerous effect, especially when it comes round to local youth populations, who may be drawn into these gangs as a way to avoid the system, and go

about their lives as they want, such as underage drinking, or substance abuse.

Furthermore, this system would create jobs all over the place, such as a new legal role, to try to defend those convicted of a pre-crime, roles for managing the system, and keeping it working, and roles for implementing it in the first place, like software developers, and technicians. Over time, too, it will improve, as more and more data is collected, and more and more people become connected to the system. This is helpful as it wouldn't have a high increase in cost as the population grows, whereas a more traditional method, of having police officers on patrol and such, would cost more, as more officers are needed to cope with the rising population.

The downside to this, however, is that the role of police officer may become unattractive, as the job becomes less necessary, and fewer people take it up. This could create a long term issue as existing police officers retire, and nobody is coming in to take their places, and hence the threat of the system to people who may create a crime is reduced, and crime may then increase. To mitigate this, the role of police could be expanded into other areas instead, such as monitoring petty crimes that are more difficult to predict than others, as they tend to be more spontaneous.

5. WHY SHOULDN'T WE DO THIS?

However, this system does come with some downsides. Most notably, the fact that someone could just not be tracked if they turned their phone off, or if they switched back to an old-fashioned device. To mitigate this, more CCTV could be installed, as well as making it mandatory to carry a modern phone around with you and keep it on at all times, which raises an even bigger concern, privacy. If your phone is tracking everything you do then surely a concern would be where the data collected is stored, and who is it shared with? If the system were to be written into law, and use was mandatory out, then there is a vast grey area where the privacy policy that everyone usually agrees to would cover, so who the user's data is shared with is not up to the government, and they could share it with whomever they want.

However, to counter this, the argument could be made that, if you have nothing to hide, then you don't have to worry. If this mindset becomes the norm, then people will be happier to comply with the system, with the knowledge that it keeps them safe, at the expense of their freedom. This sort of echos what has happened recently with COVID-19, where people have given up their freedoms (freedom of movement, and of choice) in order to better the health of the country, so the ability to get compliance from the general population is proven if you frame it correctly. We have also seen this sort of thing happen in China, with their social

credit system, however, to implement such a system here would likely require huge regime change at the top level, which would face a huge backlash, and possibly a crime wave in protest. So there must be a balance met if you want to get around this huge issue.

Another major concern is that of corruption. The data used could be meddled with by the providers in order to be more harsh on certain groups of people, such as the middle to lower classes, those whom are not of the global elite. This could then be used by these powerful individuals to keep the general population from rising up, and hence power is kept by them. Of course, this is a long shot, but if such a system was put into place, it would have to have protections against this, which is a tricky area too, as what's to say if we can trust those 'protecting' us from it.

Furthermore, when this sort of system was trialed by West Midlands police, they removed location and ethnicity data [2], which could arguably remove any form of economic and ethnic background bias, however, it was found that there was a bias towards those of minority backgrounds. There was also a study into a facial recognition system used on CCTV struggled more to identify those of colour, than those not of colour [1]. There was found to be a 34% error rate for identifying the gender of African american women, compared to the 0.8% rate for white men. While this could be down to insufficient, or erroneous training data, it shows that AI still has a way to go before being good enough for CCTV video recognition.

One the contrary, if the people in charge of the system were democratically voted in, and extensively independently audited, then an argument could be made that the people in charge have the best intentions of the people who are subject to the system. Additionally, if all the data used for the system was publicly available, as well as all crime data for the country, then the public would be able to expose any form of corruption.

6. CONCLUSION

Sum it all up here, as if they didn't even read what was above [3]

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