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### Algorithms and Crimes

Today, society is faced with the issue of violence, terrorism, and other criminal acts such as theft or fraud. To aid in the enforcement of the law and the prevention of crimes or terrorism, government entities have implemented the use of facial recognition algorithms; these facial recognition algorithms, which are simply computer programs, have been used with the expectation of aiding in crime prevention through the identification and early detainment of suspects or perpetrators before they can commit a crime. The implementation and efficacy of facial recognition algorithms in crime prevention have drawn attention from politicians and discussions from mathematicians, researchers, and the media. This is in large part due to the issue of privacy and to the cases of algorithmic misidentification of innocent citizens for criminals which have led to unfortunate arrests. Although these cases are truly unfortunate and the issue of privacy is evident, we cannot ignore that these algorithms have had notable success in helping detain criminals in cities like New York City, where the success to error ratio is large.

Given our circumstances, the implementation of algorithms to aid government entities in crime prevention is less harmful than abstaining from such practice and, thus, the least harmful option.

#### I. The Problem

Historically, society has put laws or rules in place to reduce the prevalence of these criminal acts for the safety, tranquility, and security of society as a whole. This can be seen in our own society where we have dedicated government entities such as municipal police

departments that enforce the many regulations passed by local, state, and federal legislative bodies. Moreover, the efficacy of these government entities is what promotes the safety and tranquility of society. With recent advancements by computer scientists, mathematicians, and researchers, facial recognition algorithms have been implemented by government entities with the purpose of detaining criminal and thus preventing crime.

But before continuing, we have to realize that an algorithm is a set of instructions used to accomplish a task. They are often mathematical instructions or operations that can be translated into computer code. With the given task and instructions, a computer analyzes the data that it receives and accomplishes its task (Fry 8). From this process or algorithm, the computer achieves a given goal. The goal for government entities is to prevent crime by detaining criminals and suspects before they have a chance to commit a horrible crime. But government entities can do this after having correctly identified them by using facial algorithms. Although there has been much success, there have also been instances where algorithms have committed errors and thus misidentified an innocent person to be a criminal with similar appearances, which have led to brutal arrests. Now, there are debates regarding the use of algorithms in crime prevention processes; some argue that algorithms should not be used because they raise privacy concerns regarding the use of data, while others argue they shouldn't be used if they have a chance of committing errors.

## II. Refutation

Although the intended purpose for such algorithms is to aid in crime prevention, critics have argued that an algorithm with any possibility of error and the power of stripping a citizen of their freedom should never be implemented. They emphasize the fact that these algorithms have the ability to affect citizens negatively if they have any chance of failure. In context, they argue

that algorithms should not be used because they currently have a possibility of error. Critics say this cause for concern is brought on by the most notable and tragic case of a resident of Denver, Colorado, named Steven Talley. Talley was brutally arrested after being algorithmically misidentified as a bank robber. After being brutally arrested and having the charges of robbery and assault dropped, he now remains homeless and physically ill (Manning). This instance highlights the fact that algorithms are not infallible; thus, the concern about the use of algorithms in criminal detainment is reasonable.

Another opposing party believes in abstaining from the use of algorithms to aid in crime prevention because of privacy issues. Facial recognition systems have been employed by police departments to detain criminals by analyzing video footage of people walking on the streets. In addition, these algorithms have been employed by businesses such as Walmart to identify repeat and suspect shoplifters. There is a concern among critics about transparency regarding the purpose of collection and use of facial data by governments and businesses; this surveillance by government entities and businesses raises worry for the potential wrongful use of facial data. Given the history of the propensity of government and businesses to act wrongfully and without transparency -- that is, without consideration of citizens -- critics have a case wherein abstaining from using facial recognition algorithms may be valid.

### III. Solution

Nevertheless, implementing algorithms to aid government entities in crime prevention is less harmful than not doing so. Governments are precisely faced with the issue of preventing violence, terrorism, and other criminal acts such as theft or fraud to maintain the safety, tranquility, and security of society as a whole. Moreover, with facial recognition algorithms being infallible yet greatly helpful, we have the circumstances under which the argument for

using them is valid. Mathematician Hannah Fry states that the New York City Police Department “reported successfully identifying 1,700 suspects leading to 900 arrests, while mismatching five individuals” (172). Here, the error to success ratio is quite low, which is good.

In addition, facial recognition algorithms have shown success in Manhattan, New York City, where they helped identify David Baril, a man who attacked multiple people on the streets of Manhattan using a black hammer; this identification led to the arrest and sentencing of David Baril to twenty-two years in prison (Fry 172). By helping to identify and detain criminals, algorithms have helped governments prevent further crime and maintain safety and security for society as a whole. In contrast, not having used algorithms could have led to an equally large number of criminals not being detained. Given that criminals are likely to commit another crime, crime rates in New York City may have been higher without the use of algorithms and thus detainment of criminals.

#### IV. Benefits

The benefits of the implementation of facial recognition algorithms by government entities are twofold because not only do they aid in bringing criminals to justice, but they also prevent further crime. If our government entities can bring criminals to justice and prevent further crime more efficiently with algorithms, then our government entities can more efficiently maintain the safety and security of society as a whole. However, critics will likely still not agree with such practices because of their concerns for the effects of the fallibility of algorithms and certain effects of limited transparency and privacy risks; algorithms used in the processes of crime prevention and business can impact lives of people for the better and for the worse. For these concerns, there is a compromise. With the help of expert computer scientists and researchers, government legislatures should provide regulations for the use of facial recognition

algorithms by government entities and businesses; these regulations shall hold governments and businesses accountable for errors in their algorithms and misuse of any facial data collected.

Regulation is a viable way to answer the concerns of critics because of the increased accountability and the increased incentive to improve on current algorithms while still reaping the benefits they incur on society.

We realize that there are two options as stated: We can decide to fully implement algorithms with regulations, or we can decide to not use algorithms. To gain more insight into deciding which option is best, we can ask ourselves what the best course of action is given our circumstances and abilities while not being reckless. By doing so, we follow an Aristotelian principle of being virtuous which outlines the correct course of action; this involves courage or knowledge of what to do in a particular circumstance (Crash Course). To find make the correct decision, we have to assess the situation, our abilities, and act accordingly (“Elements of Rhetorical Situations”). The current problem or situation is that of choosing to reduce and prevent crime with or without facial recognition algorithms. Weighing the success of reducing crime with algorithms and without algorithms, we can see that algorithms have been a boon to human efforts, not only to detain criminals but also to prevent crime. In the case of using algorithms, we also have to be prudent in their use; the compromise above is a viable answer to that concern. With the compromise, we can achieve the flourishing of society through safety, tranquility, and security.

Implementing algorithms to aid in crime prevention is less harmful than completely abstaining from their use. We must admit, however, that algorithms are fallible and, if used often enough and on large scales, have the potential to affect human lives for the worse through misidentification, leading to improper use of data and crime prevention respectively. However,

algorithms have the potential to affect human lives for better through criminal detainment and crime prevention. Therefore, with due compromise and further debate, I hope that facial recognition algorithms will be accepted by critics in the future with the help of regulations, accountability, and transparency.

#### Works Cited

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