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Capstone 1

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Ethics Paper

In today's world, we are surrounded by amazing technology. Engineers continue to develop new ideas and tech every day. Lately, people are questioning what technology should and should not be produced. Technology is becoming so advanced that many are beginning to worry about the future.

In this paper, we are focusing on advanced automated biometrics and how practical and ethical these new devices are. In the world of automated biometrics, there can be many benefits, but numerous individuals have come to worry about privacy and consent. Though these new advancements in technological engineering may show various benefits, one must take a closer look at the ethical practices that automated biometrics brings up.

When looking into automated biometrics, one needs to look at new standards that come along with it. In Kirby Masters Thesis, he dives into standardization and privacy. He notes that "AI/S biometrics are a recent development." This is an important observation, as he notes it allows for many loopholes in ethical legality [Kirby]. Later in his thesis, Kirby goes on to talk about the efficiency and security of automated biometrics. It is important for one to comprehend this information, to see the positives this new technology can bring to the world. Places where we can find biometrics in security are airports, borders, and other areas that require immense security [Kirby].

With automated biometrics, it can be easy to find criminal activity, a wanted suspect, etc. One can clearly see the benefits of this technology, but what about the ethical use? Does someone want cameras watching and scanning their face and every movement throughout the day? This is not currently the case, but this could become a reality. And what is to stop a government from just using street cameras as surveillance? One major topic in debate is whether

someone could spy through one's smartphone/laptop camera. This may not be the case now, but could become a near reality.

In his research, Issac Cooper studies the ethical issues of biometrics. His research states that "Since 2007, several international conferences on ethics, law or policy related to the application of bio-metric technology have been held" [Cooper]. This shows the importance of people questioning this technology's ethics. Cooper's main focus in his research is privacy. Cooper states that "privacy should include the following two basic characteristics: (i) personal, not others, public or group; (ii) unwilling to let others know, or others cannot interfere." [Cooper]. Cooper goes on to discuss that without regulation, automated biometrics can easily interfere with someone's privacy. Cooper discusses how biometric information should be stored, Whether it should be personal and confidential or have some information accessible to the public domain.

"There is no longer a need of a human eye that evaluates the correspondence between a sample and its representation" [Mordini]. This is a quote from Emilio Mordini discussing the impact biometric technology is having on our generation. Modini brings up a great point. With automated biometrics, will there be a point when technology judges the right and wrong of a person's actions over a human's analysis? Modini explains that there could be a world where robots analyze every human action. This future can seem quite frightening to one's self.

But, automated biometrics is not all bad. In fact, it has brought about a lot of good in the world. In Phillip Damm's thesis, he explains that we can use automated biometric technology not just for human analysis but also for wildlife. Automated surveillance can be an excellent way of estimating and controlling wildlife populations and helping endangered species. Damm states that "The importance of incorporating detection rates into

these demographic estimates cannot be overstated, as failure to include detection can lead

to underestimated parameters". Damm is showing the value of this technology not only through

obvious means but in other cases one may not have thought of.

As one can see, automated biometrics is playing a huge role in our future and will

continue to progress. It is clear to see that this technology can be helpful to our everyday lives,

but there needs to be extensive research on regulations and precautions when engineers develop

new ideas. In a world of technology, new devices arise every day, so one needs to think about the

usefulness of technology and its ethical and moral use. As long as public privacy is kept and

automated biometrics can help within our everyday lives, I see this technology as a great

improvement to our future.

Sources Cited

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