Andrew Ngo
Mr. Ettlin
AP Computer SCience Principles, Period 1
17 December 2018

Practice Explore Task: Facial Recognition Software

Row 1: My innovation is Facial Recognition Software, which is programmed to use biometrics to map facial features from a photo or video. It does this by comparing selected facial features from the source within its database. It has many functions like when dealing with security or everyday tasks like unlocking your phone, or opening a safe.

Row 2: Benefits include getting money out of ATMs to confirm that the individual is the person taking money out of the ATM Another is facilitating secure transactions, this is possible because in China, a service company called Ant Financial allowed customers to buy food through a digital menu, and when needed to pay they use facial recognition to confirm the order.

Row 3: Facial Recognition Software has helped find people who are missing by adding it to a database which will enable individuals to be recognized and to enform local enforcements to help the case. It also prevents theft of the iPhone X, Google's Pixel 2, and Samsung's Galaxy Note 9 because they are all installed with facial recognition so other people can not get in.

Row 4: Benefits of the Facial Recognition Software include the aid of military operations, for example recognizing the difference between a terrorist and a innocent civilian. Another benefit is helping families reunite which if gone for a long period of time could be an invaluable tool. However facial recognition software can not always be accurate. It could potentially be a mis-identification, and an innocent civilian could have been mistaken for a criminal and get there job application denied. Also hacking is a huge problem because every picture has there own "hash ID," and if that is stolen then that person could pretend to be you and ruin your reputation.

Row 5: Inaccuracy in Facial Recognition Software could effect innocent civilians because they are unable to control the fact that they are not accepted to their job just because they are mis-identified. Also if they get into an accident, and there face does not look similar, it could not identify them properly which can cause problems.

Row 6: Facial Recognition Software uses 3D sensors to distinctively identify parts of a face, like the shape of the nose, chin, eye sockets, etc. It obtains data by consistently identifying new faces, and storing them into their database.

Row 7: Facial Recognition Softwares are stored in a very compact data format, which is run on a Pentium 90 that allows large identification of stored people. Is also is reliable for rejecting unknown individuals that have an identification rate above 99%.

Row8:

1. (https://www.facefirst.com/blog/amazing-uses-for-face-recognition-facial-recognition-use-cases/), Jesse Davis West, “21 AMAZING USES FOR FACE RECOGNITION – FACIAL RECOGNITION USE CASES”, December, 16, 2018
2. (https://www.forbes.com/sites/danielnewman/2018/09/18/facial-recognition-software-the-future-is-here/#40b0fa90299d), Daniel Newman, “Facial Recognition Software: The Future Is Here”, December, 16, 2018
3. (https://www.lawfareblog.com/facial-recognition-software-costs-and-benefits), Ashley Deeks, Shannon Togawa Mercer, “Facial Recognition Software: Costs and Benefits”, December, 16, 2018
4. (https://link.springer.com/chapter/10.1007/978-1-4471-3087-1_65), Jörg Kopecz, Wolfgang Konen, and Ekkehard Schulze-Krüger, “ZN-Face: A system for access control using automated face recognition”, December, 16, 2018