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Artificial Intelligence - Computer Vision

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<div align="center">Facial Recognition Technology</div>

Facial Recognition is an artificial intelligence system that can identify a person's identity by analyzing the face. It uses biometrics to identify a person's face and compares it to others on a database. It is commonly used as a form of security. With each year, the abilities, speed, and capabilities of facial recognition technology improve that is now the standard and an expected feature in smartphones. The phone to popularize facial recognition was the iPhone X, released in 2017.

The technology behind the system is unique. Biometrics has been around for decades with the popular form being fingerprints. Fingerprinting has been a successful form of identification in multiple industries, again, mostly used for security purposes. Now, fingerprinting has been outshined by the new method of face recognition. Facial Recognition uses mapping to create a layout of your facial structure. It can detect and recognize unique features from your face. Information taken from facial recognition can be things like the distance between your eyes, the depths of your eye sockets, the size of your lips, ears, scars, moles, etc. As we age, facial recognition can also keep track of our small and unnoticeable features through the course of your life. It uses computer vision through optical input to analyze the image and then compares it to other faces in the database. That is the way your phone can identify you.

The benfits of using facial recognition, as stated a couple times already, is security. It provides a unique way of protecting your information. Should anyone come across and steal your pin codes, social security, or any tangible knowledge that should not be public, requiring facial recognition prevents scammers and robbers from taking advantage of you. The challenge of facial recognition can be the accuracy of correct identification. External sources such as light exposure or wearing accessories like sunglasses can significantly affect the performance of facial recognition. Awareness of these issues from customers and clients of companies who offer products with facial recognition technology has received feedback and have made efforts to improve the technology. For example, Apple received feedback from customers who bought the iPhone X and noted that it did not work very well at night, or that it will struggle in a dim room. Since the release of the phone, each iPhone has made slight improvements to alleviate the issue.

While not perfect, facial recognition is a fascinating system. The unique structure of its design is a progressive and huge step forward in the right direction of artificial intelligence. I can see facial recognition as the standard of security for all purposes in the future. This technology is an overall beneficial inclusion to society as it is an added layer of security to the all-ready plethora of passwords, pin codes, and locks that we use already to keep our records and information safe. My fear is somehow people will weaponize the technology in the future. Since it maps the layout of your facial features. The main people behind a company can secretly exploit their employees and they can choose to discriminate against people of certain types.