DATA AND AI ETHICS CASE STUDY #1 - Social Credit System
Kobie, Nicole. (2019, July 6). The complicated truth about China's social credit system. *Wired*.
https://www.wired.co.uk/article/china-social-credit-system-explained

The idea for China's social credit system came about back in 2007, with projects announced by the government as an opt-in system in 2014.

[Most of us] are well accustomed to credit checks: data brokers such as Experian trace the timely manner in which we pay our debts, giving us a score that's used by lenders and mortgage providers. We also have social-style scores, and anyone who has shopped online with eBay has a rating on shipping times and communication, while Uber drivers and passengers both rate each other; if your score falls too far, you're out of luck.

China's social credit system expands that idea to all aspects of life, judging citizens' behaviour and trustworthiness. Caught jaywalking, don't pay a court bill, play your music too loud on the train — you could lose certain rights, such as booking a flight or train ticket. "The idea itself is not a Chinese phenomenon," says Mareike Ohlberg, research associate at the Mercator Institute for China Studies. Nor is the use, and abuse, of aggregated data for analysis of behaviour. "But if [the Chinese system] does come together as envisioned, it would still be something very unique," she says. "It's both unique and part of a global trend."

What recourse is there? With the government system, if you want to be removed from a blacklist, you can either pay your bill or appeal to the court, says Jing Zeng, a researcher at the University of Zurich. "Bring your money to the court and then you get removed from the system," she says. "It's not a judicial system by itself, it's still the court you need to [appeal to]." It's all about building trust, says the Chinese government. The 2014 document describing the government's plans note that as "trust-keeping is insufficiently rewarded, the costs of breaking trust tend to be low."

Discussion questions

• Who are the stakeholders involved in this case?

• What ethical issues do you identify in this scenario? Note that some of these may be beneficial, while others are harmful/problematic.

• Which ethical aspects are highlighted when you view the case through the ethical lenses of rights, justice, utilitarianism, virtue, and the common good?

DATA AND AI ETHICS CASE STUDY #2 - Infer Genetic Disease from Your Face

Avramova, N. (2019, January 8). *AI technology can identify genetic diseases by looking at your face, study says*. CNN Health. https://www.cnn.com/2019/01/08/health/ai-technology-to-identify-genetic-disorder-from-facial-image-intl/index.html

A new artificial intelligence technology can accurately identify some rare genetic disorders using a photograph of a patient's face, according to a new study.

The AI technology, called DeepGestalt, outperformed clinicians in identifying a range of syndromes in three trials and could add significant value in personalized care. The study notes 8% of the population has diseases with key genetic components, and many have recognizable facial features. The technology could identify, for example, Angelman syndrome, a disorder affecting the nervous system with characteristic features such as a wide mouth with widely spaced teeth, strabismus, where the eyes point in different directions, or a protruding tongue.

"It demonstrates how one can successfully apply state of the art algorithms, such as deep learning, to a challenging field where the available data is small, unbalanced in terms of available patients per condition, and where the need to support a large amount of conditions is great," said Yaron Gurovich, chief technology officer at FDNA, an artificial intelligence and precision medicine company, who led the research.

With facial images being easily accessible, this could lead to payers and employers potentially analyzing facial images and discriminating against individuals who have pre-existing conditions or developing medical complications, the authors warned.

The technology works by applying the deep learning algorithm to the facial characteristics of the image provided, then producing a list of possible syndromes.

"While several limitations still need to be addressed to ensure the proposed algorithms are robust in the hospital environment, clinically accurate, and applicable to different age groups and ethnic populations, the potential of AI in healthcare is immense," said Cardoso, who was not involved in the research.

Discussion questions

• Who are the stakeholders involved in this case?

• What ethical issues do you identify in this scenario? Note that some of these may be beneficial, while others are armful/problematic.

• Which ethical aspects are highlighted when you view the case through the ethical lenses of rights, justice, utilitarianism, virtue, and the common good?
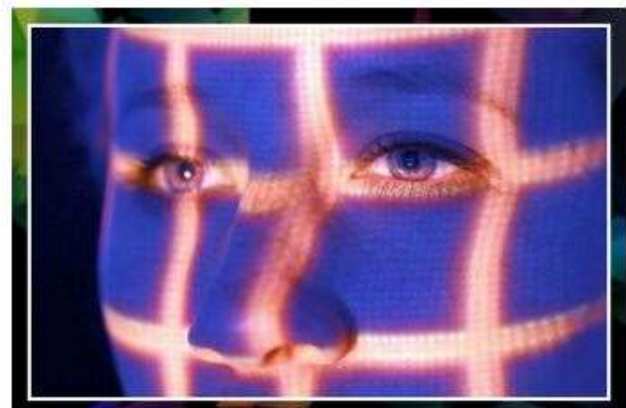
DATA AND AI ETHICS CASE STUDY #3 - VR Rage Room

Ramirez, E. (2021, May 5). *A VR ethics case study*. Markula Center for Applied Ethics, Santa Clara University.
https://www.scu.edu/ethics/focus-areas/internet-ethics/resources/vr-rage-room-an-ethics-case-study/

Rage rooms are all the rage, but sometimes you can't find one that's open (or, during pandemic times, any that are). VR Rage Room is a mod-friendly app intended to allow its users to blow off real steam in virtual rage rooms. The experience is intended to be both therapeutic and inexpensive.

The base VR Rage Room application contains a single traditional room with standard objects for destruction, including hammers, bats, and other items. The app also contains an associated store where users can purchase in-app merchandise, including different types of rooms, objects, and tools for destruction.

The app's parent company, GoldCat, also allows users to upload their own rooms, objects to be destroyed, tools, and rage scenarios to sell on their site; the creators of new VR Rage Rooms make a 10% commission on all sales. These third-party applications allow for extensive customization and even let users create their own VR situations in which to act out their rage.

The app's TOS prohibit only scenarios involving directing VR violence at humans. Users or creators who violate that proscription will be kicked off the site.

Discussion questions

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DATA AND AI ETHICS CASE STUDY #4 - Smart Lamp Posts

SmartCitiesWorld news team. (2018, Aug 29). *Hong Kong turns lamp posts into smart infrastructure. Smart Cities World*. https://www.smartcitiesworld.net/news/news/hong-kong-turns-lamp-posts-into-smart-infrastructure-3286

Raicu, Irina. (2019, September 19). *An IOT ethics case study.* Markula Center for Applied Ethics, Santa Clara University. https://www.scu.edu/ethics/focus-areas/internet-ethics/resources/smart-lampposts-illuminating-smart-cities/

Hong Kong's multi-purpose lamp posts (MPLPs) are interconnected with a telecommunication network forming an Internet of Things (IoT) backbone that enable real-time collection of city data, such as weather, air quality, temperature, people and/or vehicle flow related information, for city management and the support of various applications of smart city initiatives. They also provide services such as wi-fi hotspots, electric vehicle charging facilities, information dashboard for maps and directions, real-time traffic updates, and car parking vacancy space information.

Smart lampposts are often adopted as a means to reduce energy use, as well as to enhance public safety. A number of cities in the U.S., too, have deployed versions that include microphones and related AI technology; Los Angeles, for example, is reportedly "equipping the streetlights with sensors that can detect gunshots or other noises that may pose a threat to public safety." When there are no cars or people on the streets served by smart light posts, the smart lights dim; if motion sensors are triggered, the lights go up.

Privacy concerns have been expressed in San Jose, California, when in 2018 the city approved the installation of 1,000 smart streetlights which can also, purportedly, "[detect] car crashes, gun shots and even [serve] as an earthquake sensor." According to a report on the local NBC station, the streetlights are also equipped with "face recognition, cameras, and audio recording capabilities." While some raised concerns, one resident quoted in the news report argued that "If people know they're being watched, they don't do stupid things."

Back in Hong Kong, the rollout of the smart lampposts program began in July 2019. The following month, during mass protests, various news outlets reported that some demonstrators, worried about governmental surveillance, were cutting down the newly installed smart lampposts.

According to an article in *The Atlantic*, the Hong Kong government has acknowledged that the lampposts have enough hardware to spy on citizens, but says protesters' fears are unfounded. In July, as the first wave of lampposts were installed around the region, federal officials promised to disable some surveillance features, including license-plate recognition and continuous audiovisual surveillance.

Discussion questions

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• What ethical issues do you identify in this scenario? Note that some of these may be beneficial, while others are armful/problematic.

• Which ethical aspects are highlighted when you view the case through the ethical lenses of rights, justice, utilitarianism, virtue, and the common good?
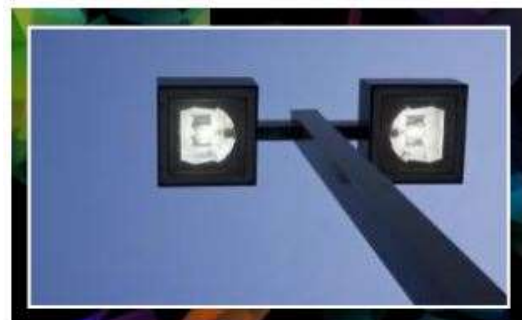
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• aiethics.princeton.edu
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