

The ethics of Computer Vision

Computer Vision is a field of artificial intelligence and computer science focused on enabling machines to interpret and understand visual information from the world, similar to how humans perceive and process images. It enables for computers to gain high-level understanding from images or videos, allowing for object recognition, classification, pattern detection and decision making.

I will talk about three types of CV applications: facial recognition, medical imagery and deepfake technology.

Facial recognition is a CV application used by almost all the countries on the planet. With its widespread usage comes a series of ethical dilemmas, including racial bias and discrimination, privacy issues and mass surveillance. In countries like the US, members of racial minorities can be falsely arrested, based on incorrect facial identification (see the case of [Kylese Perryman](#)). Furthermore, in countries like China, facial recognition is used to inflict fear and control on the population by the authoritarian government.

Scientists and engineers working with facial recognition should take better care of the racial bias when training such models.

While I think it is too late for China, in Europe we need to keep fighting as to not follow in their steps when it comes to facial recognition.

Computer Vision applications in medical imagery is a subject I am very passionate about. I don't think there is much dilemma regarding this subject, except maybe racial bias, where medical imagery can negatively impact members of racial minorities when interpreting images. [This](#) is an example of neutral bias, but scientists still need to be careful when training such models. I think AI could be a game changer when talking about medical diagnosis.

Lastly, in the last couple of years, we have seen the emergence of deepfake technology, which refers to the use of AI to create highly realistic, but synthetic media, such as images, videos or audios. People's appearances and voices can be altered, often without their consent. Deepfakes can portray people engaging in illegal activities, or they can be used to produce humiliating media of them. The year of 2024 has been one of constant elections across the world, which meant an explosion in the creation of deepfakes. We've seen countless videos of politicians and other people of importance transmitting all kinds of messages, most of them being disinformation, in the last year. Considering that AI is only getting stronger, we might see deepfakes that become much more realistic, to the point of not being able to tell them apart from reality. This is clearly an issue that must be talked about more, and for which a solution must be found.

As we can see, the applications of Computer Vision can be varied, and with this variation, a series of ethical dilemmas arise. This means that we, engineers and

scientists, must take great care when implementing such models, bearing in mind that the technology we create should be used for good.