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Ex2

1. A

See Folders

1. B

Was waren die drei typischen Probleme bei herkömmlicher Gesichtserkennungs-Software?

Illuminations, occlusions, and poses

When conditions for capturing faces are not optimal, such as when there are different facial expressions, lighting conditions or face poses, the performance of these traditional algorithms drop significantly

Welche Bildersammlung zum Testen von Gesichtserkennungs-Software unterscheidet unterschiedliche Qualitätsstufen der Bilder, wie viele Bilder von wie vielen Personen umfasst es und wie heissen die drei Stufen?

The Good, the Bad & the Ugly (GBU) dataset
8'638 from 782 different identities. It provides three protocols that mainly evaluate different illumination conditions called Good, Bad, and Ugly, where Ugly is the most difficult protocol, while Good is the easiest.

Welche Verlustfunktion lässt eine gewisse Ähnlichkeit zwischen den Gesichtern verschiedener Personen zu und verlangt nicht, dass alle Bilder so unähnlich wie möglich sind?

ArcFace introduced an additive angular margin to both maximize intra-class similarity and inter-class diversity. The big advantage of this margin is that it allows some similarity between faces of different people and does not force all of them to be as dissimilar as possible.

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2

Welche Arten von Facial Recognition hast du bereits selber angetroffen oder verwendet?
Reverse Image Search
Only read about the horrible consequences when it goes wrong.
https://www.bbc.com/news/technology-57101248

Welches sind die Chancen und Risiken von Facial Recognition? Gibt es deiner Meinung nach mehr positive oder negative Aspekte? Warum?
According to research published in April 2020 by the Center for Strategic and International Studies facial recognition technology systems in ideal conditions have a precision of 99.97% recognition accuracy level. However, perfect conditions are hardly achievable in daily operations, and algorithms face various factors affecting their accuracy.

This means if e.g. Airport Zürich with approximately 2 million passengers per moth using sunch an frt would have 600 false positives per month. What this implies is relatively open and depends on the face a false positive matched with.

Biometric surveillance violates fundamental rights such as the right to informational self-determination and freedom of expression.
In addition to freedom of expression, the right to participate anonymously in assemblies / demonstration is also at risk. The police can identify more and more people at any time with their growing database of images. Third parties can also identify participants of assemblies thanks to face search engines such as Clearview AI or pimeyes without any specific reason.

Positive:
Maybe it helped to prevent crime. But id did not find data that supports this claim.

The negative side clearly outweighs the positives.

Was gibt es für Möglichkeiten zur Regulierung von Facial Recognition?
There is no middle ground.
Outlaw automatic facial recognition in public spaces.
https://banthescan.amnesty.org/