ayonix

Why Ayonix Facial Recognition algorithms have no racial bias.

With the big three taking a breather from the Facial recognition market we asked Dr. Vural Sadi, Founder of Ayonix https://ayonix.com/, to address the recent events of supposed significant players leaving or suspending their Facial Recognition associations with law enforcement. Dr. Sadi discussed graciously for us.

"Recently IBM and Amazon announced that they would pull back from the Face recognition business. Microsoft just announced that they would not give Face recognition technology to Police forces until the human rights policy is adequately addressed.

IBM, Amazon, Microsoft decided this because of racial bias, weak engines and slow operation, a crucial decision in the Face recognition market. With this decision, they accept that the Face recognition algorithms *they are providing* are not capable of recognizing all types of races.

Chinese companies are good at Asian faces. European and US companies are good at Caucasian faces. The common point is that all of them usually work with almost frontal, environment-controlled Caucasian faces. It is because there are a lot of public faces available such as Megaface, a 10K US Faced database, Yahoo database, LFW. A substantial portion of Scientists, Face recognition development companies use either of these datasets. These datasets contain perfect conditions of Caucasian faces.

Furthermore, most of the industry trains their face recognition by using Deep learning models from Tensorflow, and Google convolutional neural network. As a result, models become big, need a lot of computational power; the training model turns to be weak for real-world conditions and different races.

Being aware of these, Ayonix has developed its face recognition methods since its establishment, collected millions of faces manually from all races all over the world.

Ayonix never used a machine-collected AI technique to collect faces like IBM was doing.

Ayonix has various algorithms for Face detection, its 3D face construction from single face photo, intelligent face tracking, 3D feature extraction, and illumination analyzer.

Face decision metrics use Deep learning. Our proprietary correlation matrices construct a deep learning network.

Ayonix develops the entire scheme of Face recognition and forthrightly tests on uncontrolled conditions in various countries. Therefore, Ayonix face recognition gives excellent results on faces of different races, even under challenging conditions.

The advantage of Ayonix is not only excellent performance on different races, but also Match speed and minimized hardware costs These are significantly important for customers to deploy the system.

Ayonix Face recognition is fast enough to run on a typical Intel Cortex CPU. There is no need for Nvidia GPU cards to recognize someone on a crowd. Standard CPUs run Ayonix Face recognition in 30fps speed. Hence, the customers do not have to spend a lot of money on GPU, server, expensive PCs and space, operation, support, and so on. Very important for system running daily.

Ayonix sells Face recognition, **not hardware**. Ayonix considers its customers' requirements and makes their deployment much more straightforward, more comfortable, and less expensive.

Scalability is also another parameter that we take care of. Going from one single camera to a few thousand only takes a few days, keeping costs to a minimum.

Now the new world is starting, and the modern world is becoming more challenging; let AYONIX be everywhere to support the new world."

We thank Dr. Sadi for his open report and honor his direct association with Rfusion and Entrical.

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