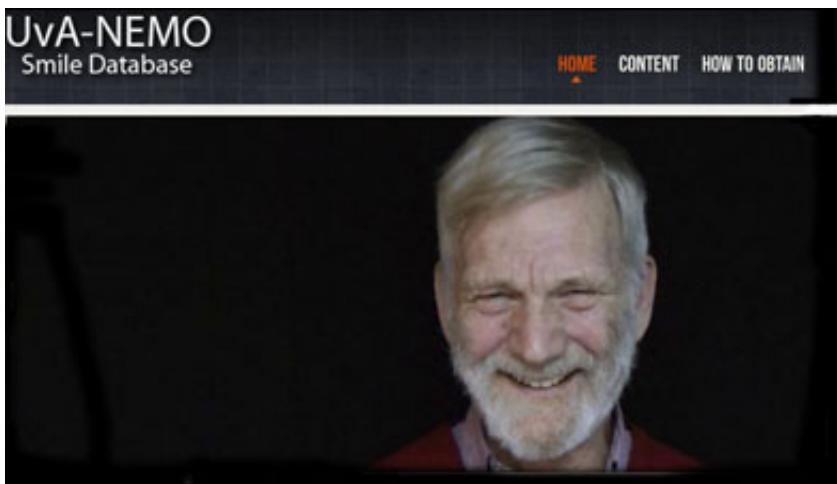


Dutch computer scientists present smile database

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What exactly happens to your face when you smile spontaneously, and how does that affect how old you look? Computer scientists from the University of Amsterdam's (UvA) Faculty of Science recorded the smiles of hundreds of visitors to the NEMO science centre in Amsterdam, thus creating the most comprehensive smile database ever.

481 test subjects participated in the research of Theo Gevers, Hamdi Dibeklioglu and Albert Ali Salah. The researchers made a [video recording](#) of a posed smile and a spontaneous smile for each participant. The subjects also were asked to look angry, happy, sad, surprised and scared. Gevers and Salah analysed certain characteristics, such as

how quickly the corners of the mouth turn upwards. This knowledge can be applied to computer software which guesses ages, recognise emotions and analyse human behaviour.

The researchers also asked the test subjects to look at images of other test subjects. They had to guess the age of those people and state how attractive they found them. They were also asked to judge character traits, such as whether the person is helpful by nature, or if that person is perhaps in love?

The data collected allowed the researchers to develop software that can estimate people's age. The software takes into account whether someone is happy, sad or angry, and adjusts its estimate accordingly. The software appears to be slightly better at estimating ages than humans. On average, humans' estimates are seven years off , while the computer is six years off on average .

The research of Gevers and Salah also shows that you look younger when you smile, but only if you are over forty. If you are under forty, you should look neutral if you want to come across younger.

The research was conducted as part of the project Science Live, sponsored by the Netherlands Organisation for Scientific Research (NWO) and the Royal Netherlands Academy of Arts and Sciences (KNAW).

More information: www.uva-nemo.org/

Provided by University of Amsterdam

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