Face recognition is a method for identifying an unknown person or authenticating the identity of a specific person from their face.  
  
NIST, the US National Institute of Standards and Technology, has been performing tests of facial recognition algorithms, the Face Recognition Vendor Test , since 2000. The image datasets used are mostly law enforcement mug shots, but also include in-the-wild still images, such as those found in Wikimedia, and low-resolution images from webcams.  
  
Related NIST face recognition testing programs have studied demographic effects, detection of face morphing, identification of faces posted on social media, and identification of faces in video.  
  
There have been several issues, starting with the 2009 face tracking software that could track whites but not Blacks, and continuing with the 2015 MIT study that showed that the facial recognition software of the time worked much better on white male faces than female and/or Black faces.  
  
In 2019, San Francisco became the first major American city to block police and other law enforcement agencies from using face recognition software; Microsoft called for federal regulations on facial recognition; and MIT showed that Amazon Rekognition had more trouble determining female gender than male gender from face images, as well as more trouble with Black female gender than white female gender.  
  
In June 2020, Microsoft announced that it will not sell and has not sold its face recognition software to the police; Amazon banned police from using Rekognition for a year; and IBM abandoned its facial recognition technology.  
  
There are also several open source face recognition algorithms, of varying quality, and a few major cloud services that offer face recognition.  
  
The Azure Face API does face detection that perceives faces and attributes in an image, performs person identification that matches an individual in your private repository of up to 1 million people, and performs perceived emotion recognition.  
  
There are dozens of face datasets available for downloading that can be used for recognition training. Not all face datasets are equal: They tend to vary in image size, number of people represented, number of images per person, conditions of images, and lighting. Law enforcement also has access to non-public face datasets, such as current mugshots and driver’s license images.  
  
Some of the larger face databases are Labeled Faces in the Wild, with ~13K unique people; FERET, used for the early NIST tests; the Mugshot database used in the ongoing NIST FRVT; the SCFace surveillance camera database, also available with facial landmarks; and Labeled Wikipedia Faces, with ~1.5K unique identities.