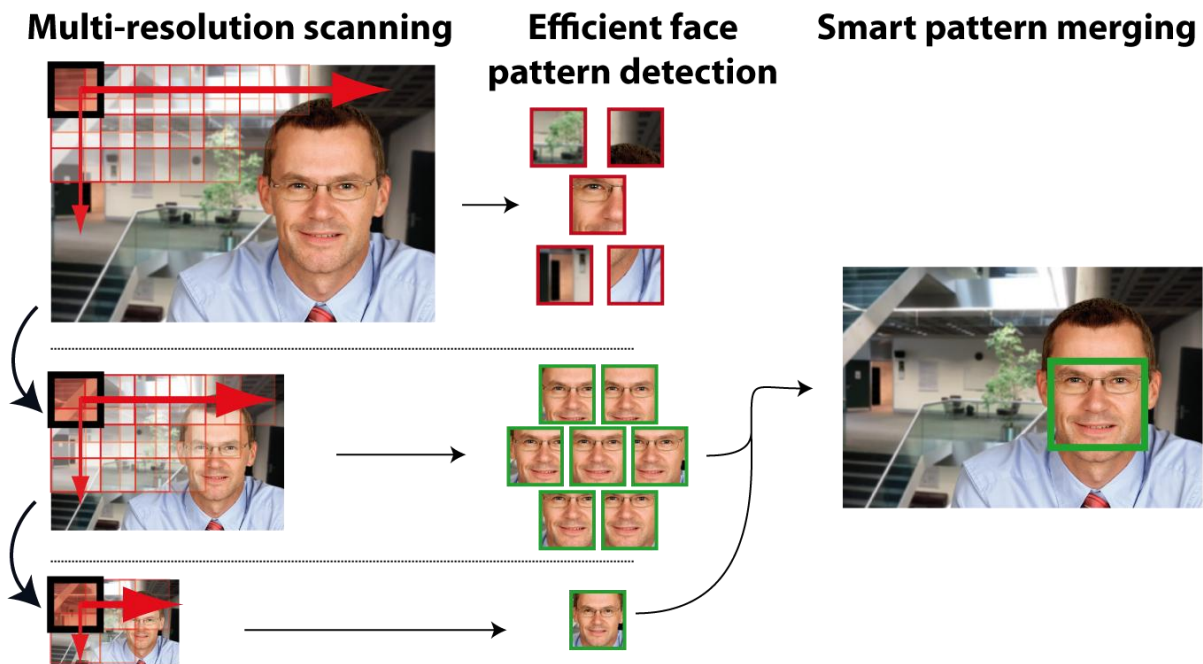




Face finding: technology overview

Our face finding technology has three main steps: multi-resolution scanning, efficient pattern detection and smart pattern merging.



MULTI-RESOLUTION SCANNING

The input image is scanned at different resolutions and locations with a sliding window for subsequent processing.

FACE PATTERN DETECTION

Each sliding window is processed by an innovative pattern detection algorithm (dedicated to faces). This algorithm is efficient in terms of speed and robustness to illumination.

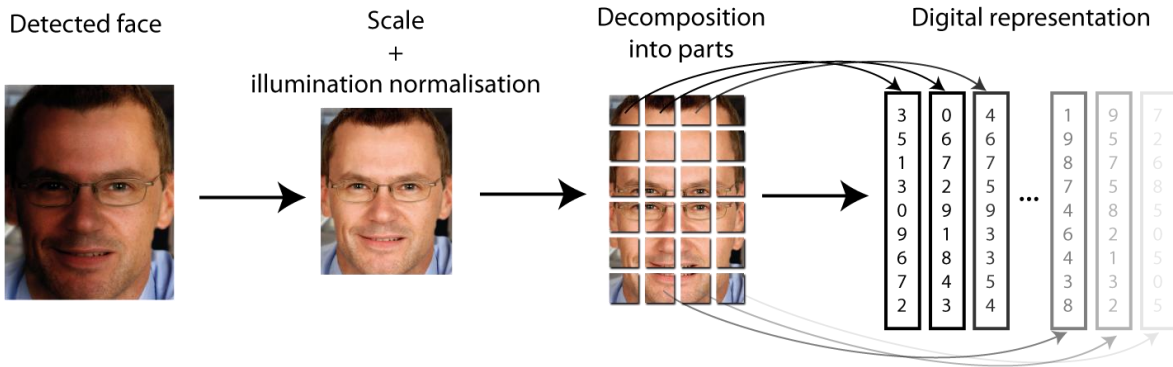
PATTERN MERGING

Finally, multiple face detections are merged using a smart technique recovering from imprecisions and allowing better face alignment.



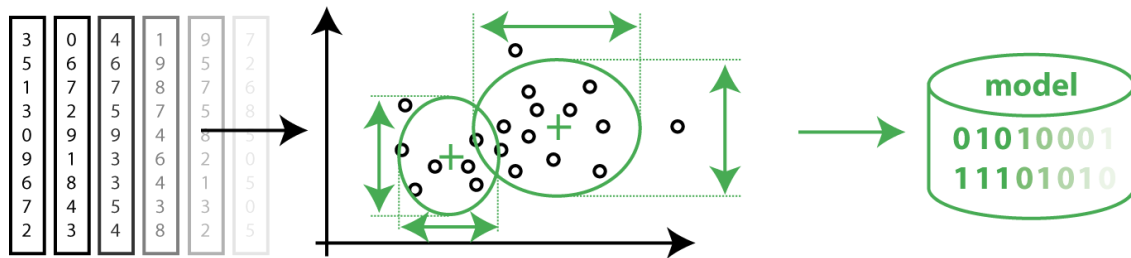
Face recognition: technology overview

The detected face is scaled and is photometrically normalized to minimize illumination conditions. Then the normalized face image is decomposed into redundant overlapping parts further encoded into an efficient digital representation.



ENROLLMENT

We transform the digital representation into a compact model of identity using an advanced machine learning technique.



AUTHENTICATION

During matching, the digital representation of a test face image is compared to the models of identities stored. The model the closest to the digital representation is the recognized identity.

