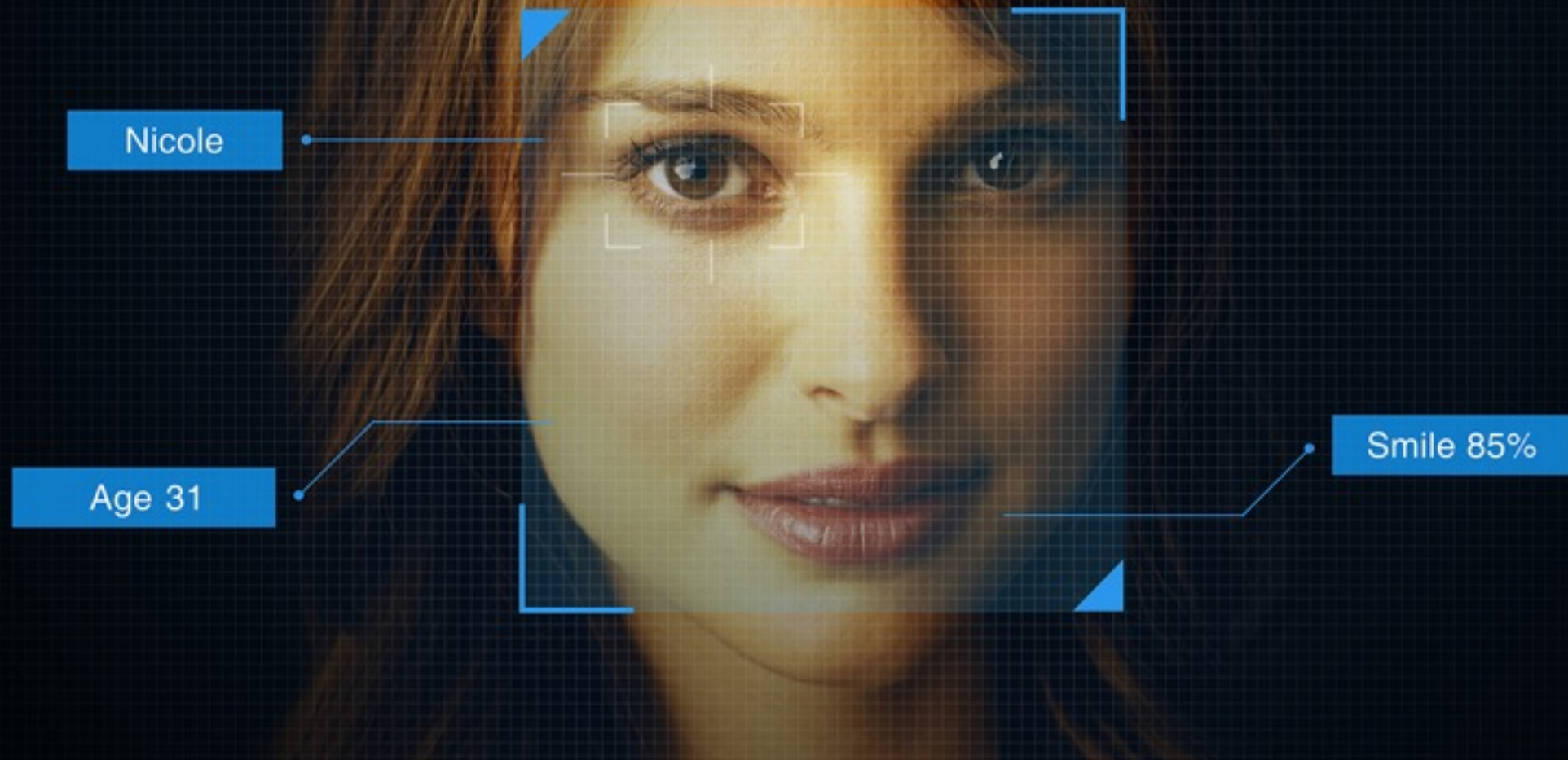


Face++ = new face recognition ();



GPU-ACCELERATED FACE IDENTIFICATION USING PRINCIPAL COMPONENT ANALYSIS

XIANGLU KONG AND FRANCIS LAN

The Problem

1. Recognize a person from known individuals
2. Efficiently store a large number of faces

Architecture

Training

- Starting from a normalized dataset of faces
- Compute eigenfaces
- Compute the coordinates of the faces in the Eigenfaces space

Testing

- Take a picture (and normalize)
- Get the closest match from the dataset

Suited for GPU

- Compute average face: reduce
- Compute eigenfaces: parallelization (matrix operations)
- Compute coordinates: parallelization (dot product)
- Comparison: parallelization (dot product)

Performance Analysis

- Existing dataset of faces from the Internet
- Add new faces and test match accuracy

