AUTOMATIC ATTENDANCE SYSTEM BY FACE RECOGNITION
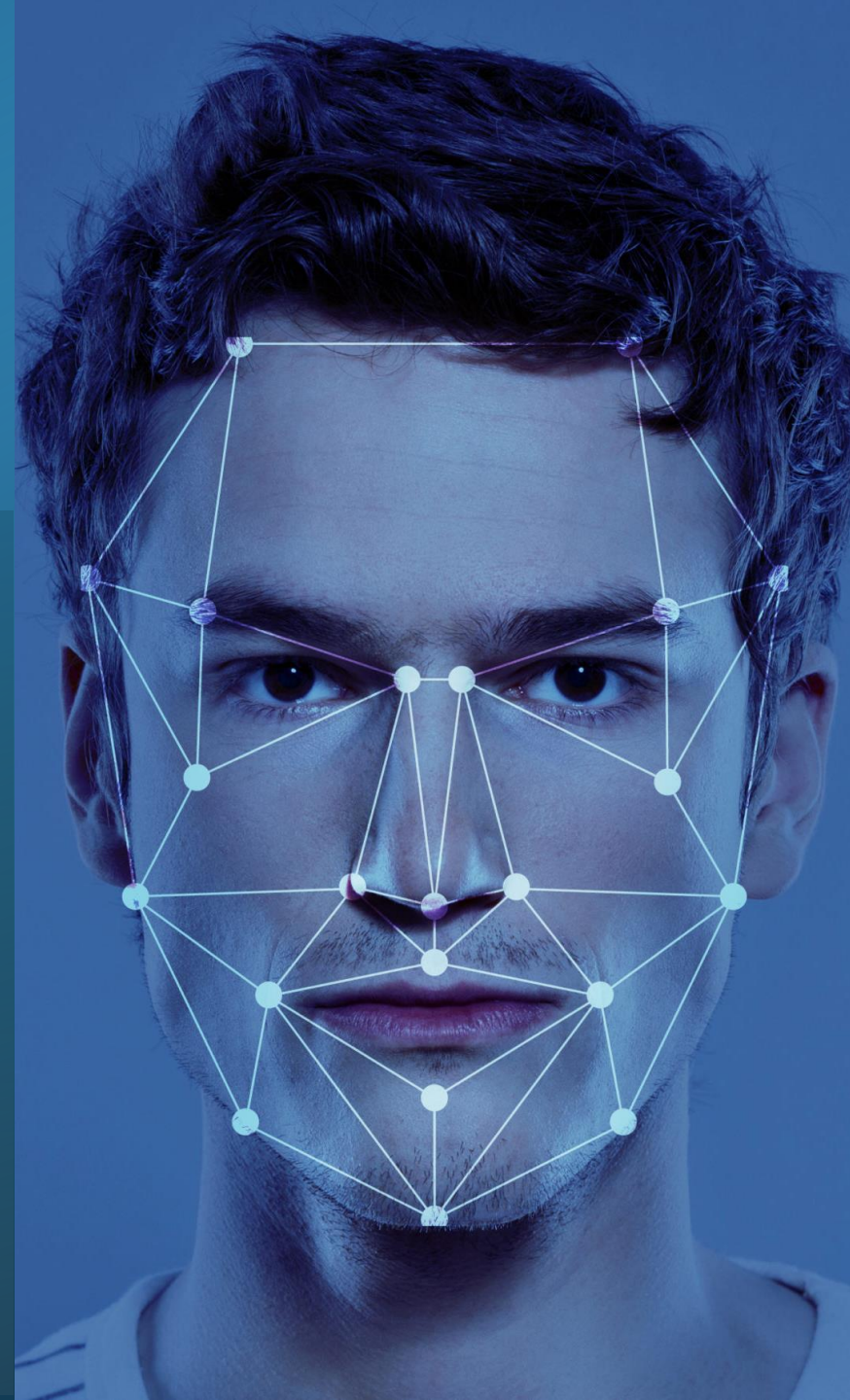
By Group 4
Mohammad Faizan (100886493
Kunal Krishan Sharma (100938687)
Vandana Patter (100941405)
Sanjay Kumar (100942249)
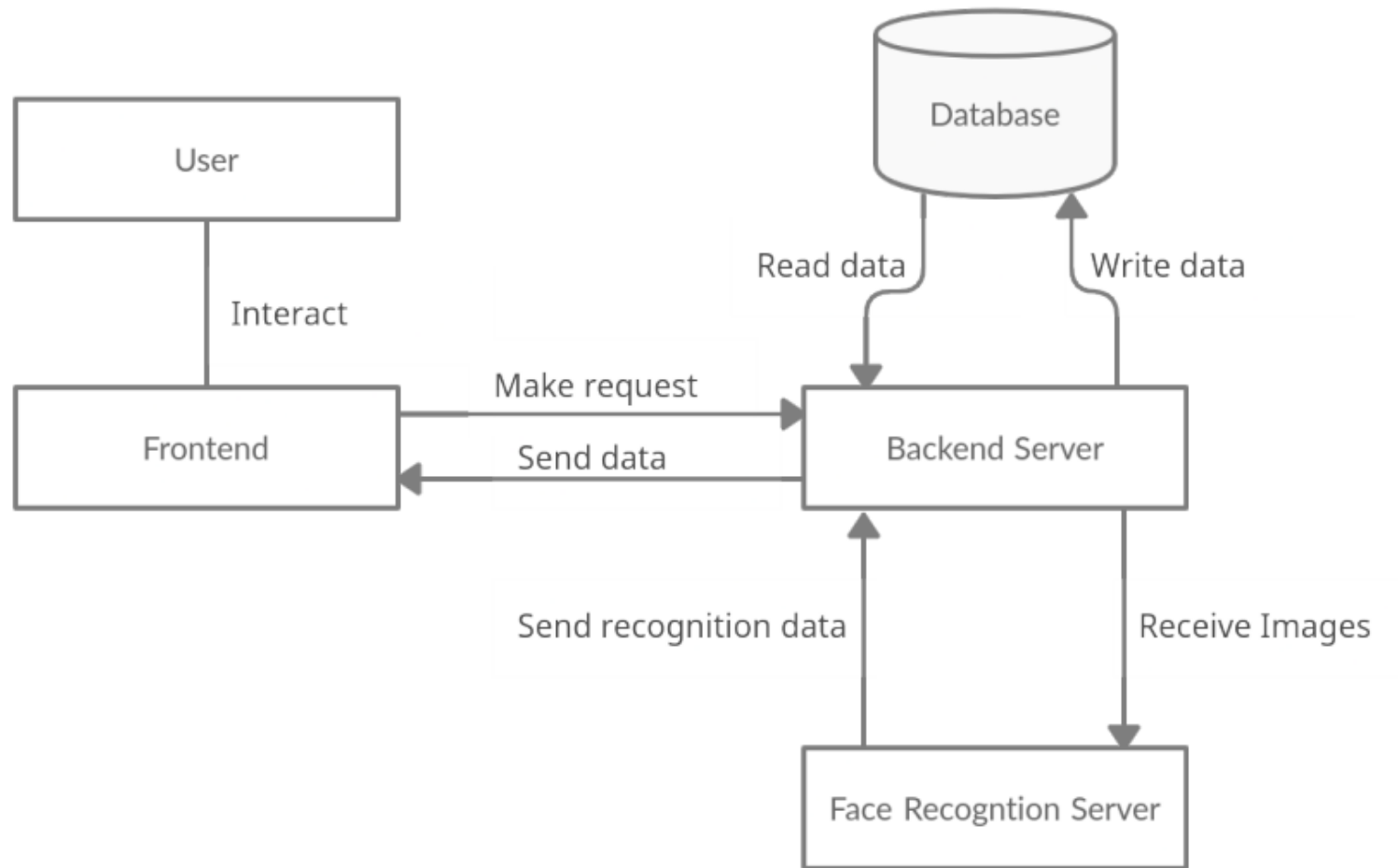Princeton (100934567)

OVERVIEW

- **Face recognition** is a step further to face detection. In face detection, we only detect the location of the human face in an image but in face recognition, we make a system that can identify humans.

- It can also be stated as, "Face recognition is a broad challenge of verifying or identifying people in pictures or videos. Big tech giants are still working to make a faster and more accurate face recognition model."
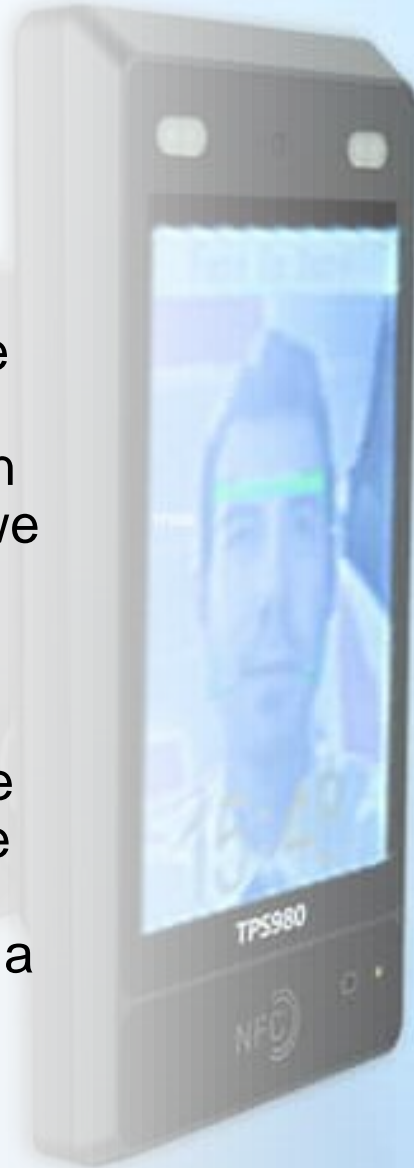
PROJECT STAGES

- **Face Detection:** Locate faces and draw bounding boxes around faces and keep the coordinates of bounding boxes.

- **Face Alignments:** Normalize the faces to be consistent with the training database.

- **Feature Extraction:** Extract features of faces that will be used for training and recognition tasks.

- **Face Recognition**: Matching of the face against one or more known faces in a prepared databasee complicated but getting started doesn't have to be

SYSTEM ARCHITECTURE

User

Interact

Frontend

Make request

Send data

Database

Read data

Write data

Backend Server

Send recognition data

Receive Images

Face Recogntion Server

FRONTEND TECHNOLOGY USED

Mobile Device

Webcam

BACKEND TECHNOLOGY USED

PYTHON PROGRAMMING LANGUAGE

POPULAR LIBRARIES SUCH AS OPENCV

FACE **RECOGNITION**

DATABASE

MYSQL

MSEXCEL

AI FEATURES

Face Detection: Use a face detection algorithm/library like OpenCV, Dlib, or MTCNN to locate and extract faces from images or video frames.

Face Recognition: Employ a face recognition library like OpenCV, dlib, or Face_recognition to identify and recognize individual faces from the detected face images.

Machine Learning Models: Train machine learning models, such as support vector machines (SVM) or deep learning models (e.g., Convolutional Neural Networks or CNNs), to improve face recognition accuracy.

THANK YOU