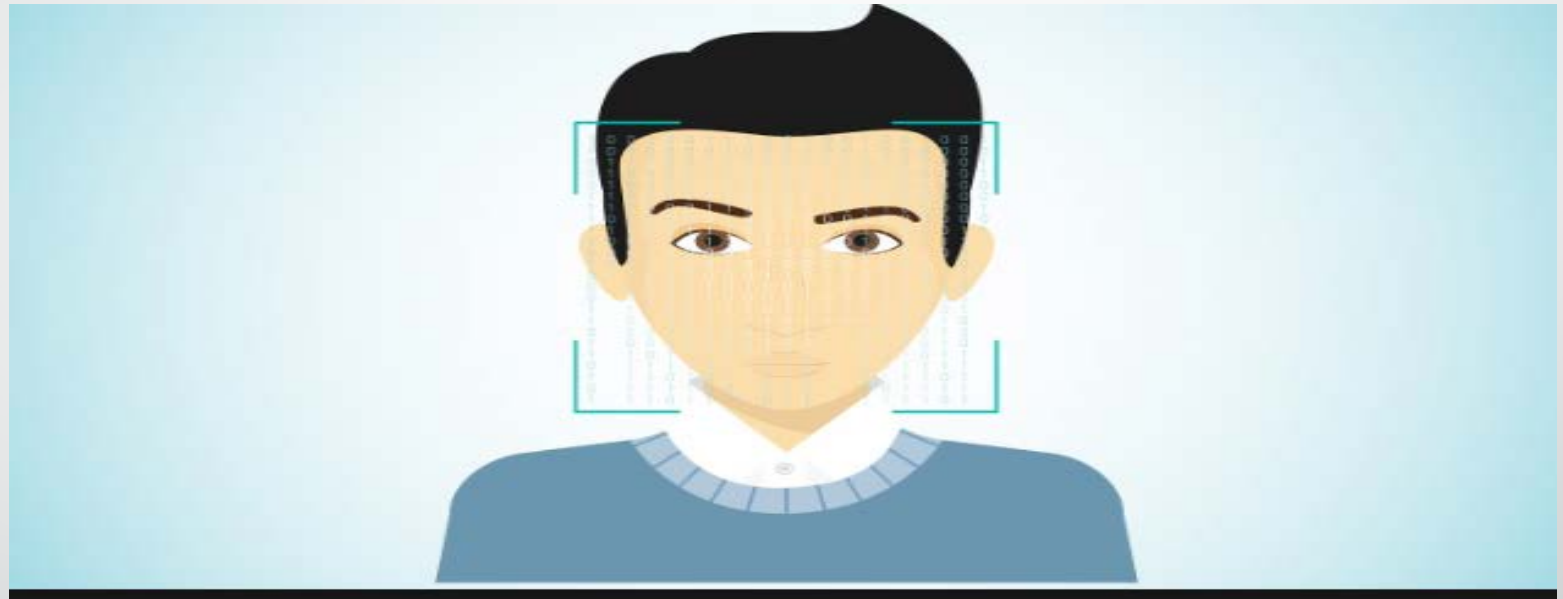# Face Detection

Artificial intelligence Lab

cse-418

Team members

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Objectives

➡ **Capable of identifying or verifying a person from a digital image**

What is Face Detection?

➡ **The definition of face detection refers to computer technology that is able to identify the presence of people's faces within digital images**

Face detection and Recognition

- **Usually, face detection is a first step before doing face recognition.**

- **Face detection only works by capturing an image of a person but face recognition works by gathering the stored images**

- **Face detection has several applications, only one of which is facial recognition.**

Why face detection

- **Security maintenance**
- **It goes with modern era such as while we an unlock a device like mobile phone .**
- **Auto control system**

Methodology

Requirement tools:

- OpenCV
- Python IDLE
- Laptop(with web cam)

Methodology

Face detection is performed by using classifiers. A classier is essentially an algorithm that decides whether a given image is positive(face) or negative(not a face). A classier needs to be trained on thousands of images with and without faces.

Fortunately, OpenCV already have pre-trained face detection classifiers, which can be used in our program.

➡ The two classifiers are:

- Haarcascade Classier and

- Local Binary Pattern(LBP) classier.

- In our project, we use the *haarcascade_frontalface*.

Limitation

- **Our project cannot detect the faces accurately in low light**

Future Plan

- **Our project can only detect the faces. Not find out the matched faces that stored in the dataset. So we will try to do that in future like this image.**

- # Thank you