TECHGIG

IDEA SUBMISSION

PROBLEM STATEMENT

How can an individual know who has withdrawn money using his/her ATM card ?

PS: ATMs are the most accessible places to common people for money withdrawal. Safety for the money of users should be ensured.

EXPLANATION OF THE PROBLEM

- There are many cases where strangers or other family members can access your ATM card by knowing or illegally tracking your password.

- In such situations, detecting the person's face image and keeping them available to view in an **app** can add value to our lives.

SOLUTION

A FACE DETECTOR INFRONT OF THE ATM MONITOR to detect who is the person withdrawing amount at a particular time.

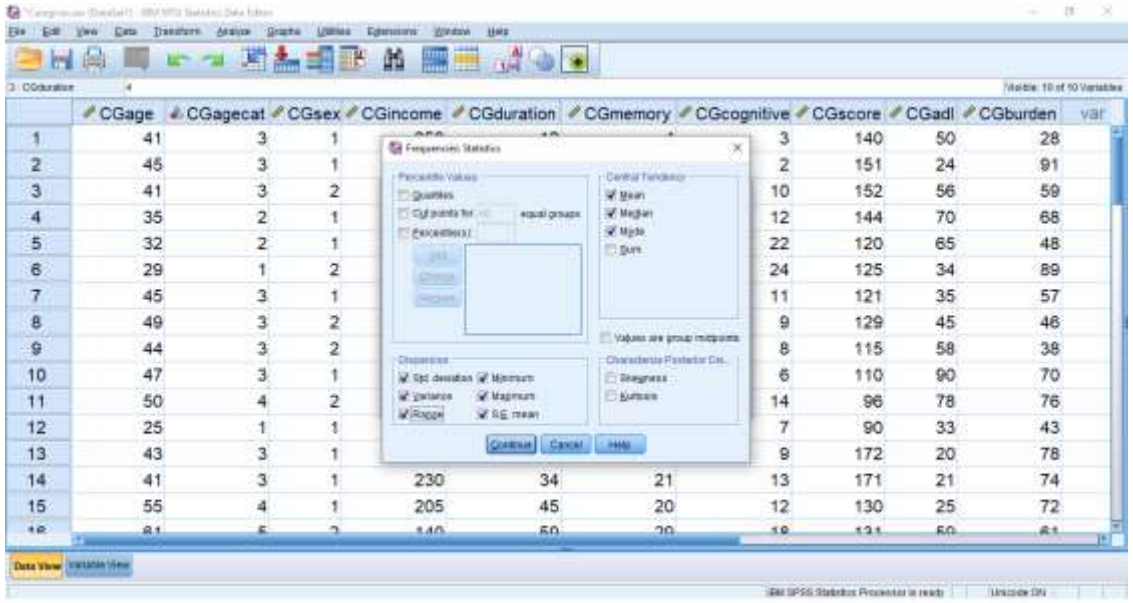
An APP can be created where the owner can check if some unknown person has accessed his/her ATM card . Either DIGITAL or THERMAL images can be used to recognize in necessary cases.

DIGITAL IMAGE

- Vector images resulted from mathematical geometry (vector). In mathematical terms, a vector consists of both a magnitude, or length, and a direction.
- Often, both raster and vector elements will be combined in one image; for example, in the case of a billboard with text (vector) and photographs (EPS, PDF, and AI).
- Here even the details of the person can be inferred from any amount of stored data. The basic idea is any image can be represented in numbers. It is called **digital image**.

TOOL: SPSS

SPSS **provides data analysis for descriptive and bivariate statistics, numeral outcome predictions and predictions for identifying groups**. The software also provides data transformation, graphing and direct marketing features. The software interface displays open data similarly to a spreadsheet in its main view.

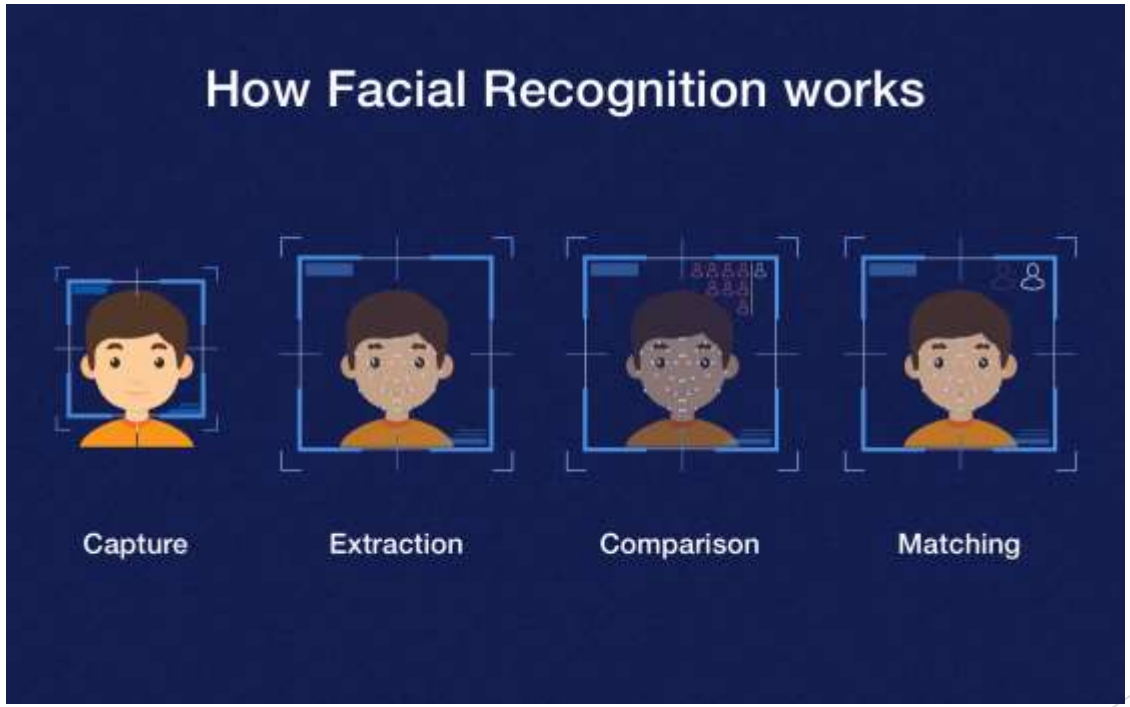


This Photo by Unknown Author is licensed under CC BY-SA-NC

THERMAL FACE IMAGE of any person can be detected from the body heat pattern of a human being . So there are many ways to achieve this

FACIAL RECOGNITION

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 . **TOOL: Python(openCV)**



This Photo by Unknown Author is licensed under CC BY

USES AND BENEFITS

The crimes which are commited by misusing the ATM pins by people in closer circle can be controlled.

It can help individuals who want to keep FACE LOCK(instead of numerical pin) in order to access their money.

It can be extended towards maintaining anyone’s account details too.

Accessible to rural areas

POINTS TO PONDER

Initially we should focus on sending images to the app so the owner of the bank account can try to view and identify who the withdrawer is. CCTVs are only accessed during large issues. Whereas it may take a long time.

Image viewer software displays images. Web browsers can display standard internet image formats including JPEG, GIF and PNG. Some can show SVG format which is a standard W3C format. As we go further Face Recognition techniques can be implemented .