MAKERERE UNIVERSITY

COLLEGE OF COMPUTING AND INFORMATION SCIENCES

B.COMPUTER SCIENCE

RESEARCH METHODOLOGY

ASSSIGNMENT1

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BACKGROUND

The collage of computing and information science started in 2001 with few number of students and was revised in 2009.Since then the number of students have been increasing from 2001 up to date. Due to this gradual increase of students at the college, many non-students (intruders) have used this chance to access the resources and the services provided by the college .The security system of this college have faced a lot of challenges including failure to I identify the real students who are legible for the services provided by the college from those who are non-students some of which are thieves who steal student belongings.

On 20 September 2014, I personally lost my laptop when an identified person came and sat near me and I had to leave my laptop with him such that I can go and have a short call. To my disappointment I found when the guy had left with my laptop. I looked around the college he was nowhere to be see until I consulted some of the students who told me that "there are many intruders in this college and never to leave your property with some you don't know". Since then I have seen many of my friends crying of the same problem. When I tried to find out the main cause of this problem, I was challenged when I discovered that, due to the increased number of non-students (intruders) at the college is the main cause of theft at this college.

In my research I provide a solution on how to differentiate non students from true students by use of the artificial intelligence knowledge I gained from my last academic year semester 2 through the use of biometrics which uses a finger print detection.

PROBLEM STATEMENT

Very many Makerere university students have lost their laptops from the college of computing and information sciences as a result of increased number of non-students (intruders) some of whom are thieves that end up stealing the student's laptops. In almost all of such cases, students around the college have reported mysterious loss of their laptops which becomes hard for both the students and the college administration to trace. We are proposing a solution to end this nightmare through the use of biometrics at the entrance into college.

MAIN OBJECTIVE

- To develop a biometric system that scans the finger prints in order to be allowed to access the services within the college.
- To test and validate the developed biometric system.

SCOPE

The project spans a cross Makerere University in particular at the college of computing and information sciences .It tackles the security aspect of the college. It includes the scanning of the fingers to identify the true students who are eligible for the services provided by the college from those who are non-student (intruders).

SIGNIFICANCE

This project is of great importance once used and its advantages are as follows:

- ➢ It has a college advantage. Every person has the characteristics, in this case fingers. People who have fingers are accommodated with this system.
- ➢ It also has a uniqueness benefit. No two people have the same identical characteristics.
- ➢ The system is permanent. The required characteristics do not vary with time. The states of the fingers do not easily change.
- ➢ There is also a collectability advantage, it is easy to collect fingerprint scans since they are common to almost every one.
- ➢ The system has a performance advantage too. The project delivers accurate results under varied environmental circumstances. The fingers will produce the same results despite the season, whether during the dry or rainy seasons.
- ➢ The project is acceptable because non-intrusive methods are used. The general public accepts the sample collection routines which in regards to this system is fingerprint scanning because they do not encroach on one's privacy.
- ➢ Within the college. The fingerprint scans help in authenticating the eligible students into the system in order to access the college resources and services. This reduces the number of intruders into the college hence reduce cases of thrifty.

SPECIFIC OBJECTIVES

a. To study the existing security system at the college.
b. To obtain the requirements for the system from potential user and already existing systems.
c. To analyze the requirements obtained.
d. To design and develop a biometric system.