**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY,**

**KUMASI**

**COLLEGE OF ENGINEERING**

**DEPARTMENT OF COMPUTER ENGINEERING**

DESIGN OF A FACIAL RECOGNITION PAYMENT SYSTEM

Project submitted in partial fulfilment for a Degree of Bachelor Science (BSc.) in Computer

Engineering.

By

Owusu William Kwadwo

Nnuro Steven Kofi

Osei-Tutu Gideon

SUPERVISOR: ING. DR. ELIEL KEELSON

DECEMBER 2019

**DECLARATION**

We hereby declare that except for specific references which have been properly acknowledged, this work is the result of our research and itbhas not been submitted in part or in whole for any other degree elsewhere.

Signature............................................................Date..................................................................

Owusu William Kwadwo (Candidate)

Signature............................................................Date..................................................................

Nnuro Steven Kofi (Candidate)

Signature............................................................Date..................................................................

Osei-Tutu Gideon (Candidate)

Signature............................................................Date..................................................................

Dr. Eliel Keelson (Supervisor)

**ABSTRACT**

The rapid rise of the internet brought with it many advancements and advantages. Communicating with people all around the world, research work, online banking and online shopping (transactions) are a few of the advancements that the internet has gifted us.

Each of these advancements are not without its disadvantaes though, and in the field of online transactions a lot of fraudulent activities involving transactions have popped up over the years. A wide array of security methods have been put in place to curtail these activities but perpetrators hve still found ways to bypass all these measures.

Standard measures such as four or six digit pins, alphanumeric passwords, retina scan and fingerprints have been implemented to secure online transactions. These features are good in their own respect but are not secure enough to prevent hackers or anyone from getting access to a user’s account and performing unauthorized transactions.

Take for example a user who forgets her password often so decides to write it down on a piece of paper and stores it somewhere she feels is safe from prying eyes. In the eventuality of anyone stumbling across it, it becomes very easy to access her account and perform transactions without her knowledge.

This calls for better and efficient method of keeping one’s account, personal information and transactions safe from attackers. We therefore decided through extensive research that the best way to do this would be through implementing a front-view facial recognition system.

This project is therefore aimed at developing a facial recognition system which is the most efficient and suitable biometric technology to secure pyments, transactions and also address the aforementioned challenges and disadvatages of the other security measures. With the facial recognition system users will feel safe, secure and have the peace of mind knowing that no one has access to their accounts and their online transactions can be handled with speed, convenience, precision and security.

**DEDICATION**

We dedicate this project to our supervisor, Ing. Dr. Eliel Keelson, for the aid, training and knowledge imparted to us during our stay in this noble institution and for the efforts contributed towards the completion of this project. May God richly bless him and grant him with more wisdom and insight.

**ACKNOWLEDGEMENT**

Without God this project will not have been possible, we therefore acknowledge His grace that was assured us from the commencement to the final phase of this project.

We also extend our warmest gratitude to our supervisor, Ing Dr. Eliel Keelson, for his contribution, supervision and insightful evaluations in making this process a success.

**Table of Contents**