FACULTY OF ENGINNEERING

DEPARTMENT OF COMPUTER ENGINEERING

ANDROID SMS SUPPORT ASSISTANT FOR THE LUGANDA SPEAKING BLIND PERSONS

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A PROJECT REPORT SUBMITTED IN THE PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF BACHELOR OF COMPUTER ENGINEERING OF BUSITEMA UNIVERSITY

DECLARATION

I SSENKOOTO STEPHEN, declare that the project titled **ANDROID SMS SUPPORT ASSISTANT FOR THE LUGANDA SPEAKING BLIND PERSON** is original and has been carefully made to the best of my knowledge and has not been submitted to any Institution of Higher Learning for any kind of award.

Sign.....

Date.....06/06/2018.....

APPROVAL

I certify that the project under the title "**android sms support assistant for the Luganda speaking blind persons**" has been done under the supervision of Madam Godliver Owomugisha.

Signature .....

Date 05/06/2018.....

Ms. GODLIVER OWOMUGISHA

Department of Computer Engineering

ACKNOWLEGEMENT

My Supervisor, Ms. Godliver Owomugisha who has continuously guided me throughout this project has been a parent to me and provided where necessary, may God bless you Madam. Not forgetting my Father Mr. Senyimba Posiano, Mother Mrs. Namuli Rose, my brothers, sisters and friends who have provided financially, materially, spiritually until the completion of this project, may God bless you abundantly. Most important of all, the Almighty God, He has worked both indirectly and directly to see to it that I am successful.

LIST OF ABBREVIATION AND ACRONYMS

DIVA	Directions In to Velocities of Articulators
SMS	Short Message Service
NN	Neural Network
PC	Personal Computer
SIM	Subscriber Identity Module
STT	Speech To Text

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ABSTRACT

The Population in Uganda is always increasing exponential throughout the all nation with an annual increase of at least a million people. The ever increasing population of Uganda consists of a certain proportion of Luganda speaking blind persons which are spread all over the country. Messaging is done by specifying the Receiver's contact number and the message body which has always been hard for the Luganda Speaking Blind person through the existing applications due to sight disabilities. Basically the current methods of messaging are too hard for the Luganda Speaking Blind Persons to use due to their design and Language used.

Despite the improvements in technology and wide spreading applications, the problem experience by the Luganda speaking blind people during the sending and receiving of messages with the existing messaging application has not been solved yet. The existing applications have limitations during their usage such as language used, user interface design and hence they does not interactively favor the Luganda speaking blind persons.

Since most of the Blind people in Uganda are illiterate but they know how to speak Luganda, it is therefore necessary to simplify the existing technology and mobile messaging applications to ease the life of the Luganda speaking Blind people, thus an android sms support assistant for Luganda speaking blind persons has been developed to solve this problem.

This new application that uses Luganda Speech to Luganda Text and Luganda Text to Luganda Speech technology for communication has been developed to ease communication for the Luganda speaking blind person with his or her friends through messages.

The main objective of this project is to develop an android sms support assistant for Luganda speaking blind persons since it is observed that Luganda speaking blind persons are limited by the current messaging applications in both sending of messages and understanding the received message.

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CHAPTER ONE

INTRODUCTION

1.1 Background.

Blindness is becoming a social problem sharply impinging on the conscience of the world. Even if a person is incurably blind, he still has social rights and economic possibilities that must be realized and fulfilled. This calls for the clarification of the many aspects of blindness and the determination of the measure of society's responsibility for that segment of the world's population which labors under the handicap of visual impairment [1]. The modern world is becoming increasingly conscious not only of the problems confronting its citizens of the dark but also of the potential contribution to society that can be made by the sightless. And from the earliest times blindness has aroused compassion, based primarily on two almost conflicting emotions: fear and sympathy [2]. Fear, not of the blind but that their own sight might be lost, engenders in people a sympathy that makes them want to help the blind and to make life as easy as possible for them.

Clinical examination was performed in Uganda and a World Health Organization (WHO) form completed, with analysis by its computer program in 2005. Results by WHO categorize 14.8% had visual impairment, 6.5% had severe visual impairment, 63.2% were blind and 15.2% were too young to test. The acuities and causes were similar in school and community groups, excepting cortical visual impairment and multiple impairment, which are much commoner in the community. Cataract was the largest cause of visual impairment (30.7%) and surgical outcome was unsatisfactory. Visual loss following corneal ulceration was the second commonest cause of subnormal vision (22.0%) [3].

Baganda are the most dominate ethnic tribe in Uganda accounting for at least 16.5% of the total population followed by Banyankole with 9.6% and Basoga with 8.8%. This shows that Luganda is the most widely spoken local language in Uganda and some of these Luganda speaking are blind not only baganda but also some bantu tribes have some Luganda speaking blind people amongst them.

Therefore this android sms support assistant for Luganda speaking blind persons developed using speech to text and text to speech technology with a Luganda dictionary support

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