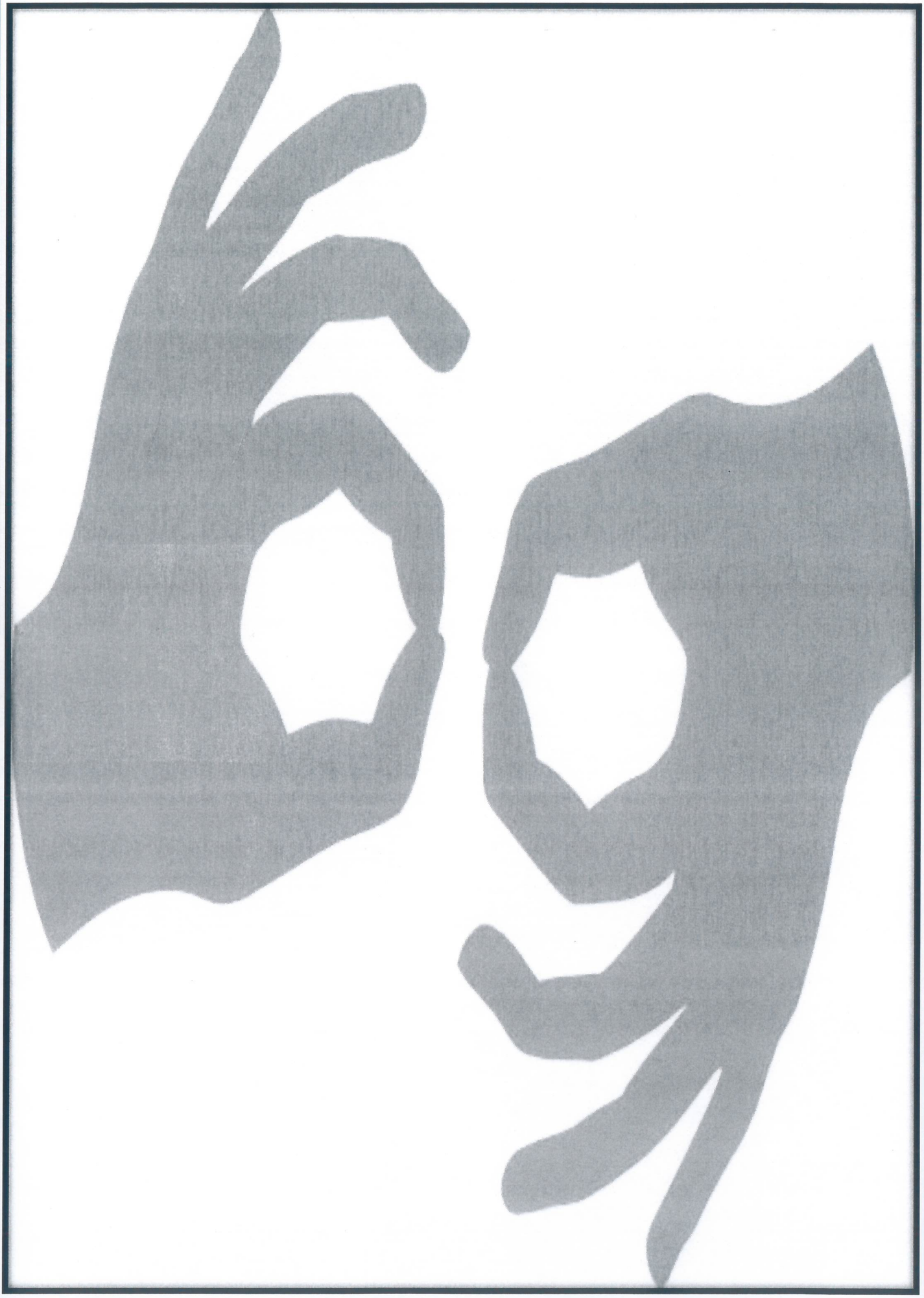

Intelligent sign language Interpreter using Image Processing

Certificate

This is to certify that the project entitled

"Intelligent sign language Interpreter using Image Processing"

Is a record work done by

Mr. Sanchai S. Mhamal
Mr. Rahul Korgaonkar

Of Master of Science in Electronics, Part II (2020-2021)

The candidates themselves have worked on the project during the period of study under my guidance and to the best of my knowledge it has not previously formed the basis of award of any previous degree or diploma at Goa University or elsewhere.

Examiner

Project Guide

Intelligent sign language Interpreter using Image Processing

Master thesis performed in Electronics

By

Sanchai S. Mhamal

Rahul K. Korgaonkar

Goa University 2020-2021

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Our acknowledgement is incomplete without thanking our parents who have always been there to support and motivate us.

Declaration

We solemnly declare that this project has been composed by us and to the best of our knowledge has not formed the basis for the award of any diploma or degree.

M.Sc (ELECTRONICS)
2020-2021

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Mr. Rahul K. Korgaonkar

Abstract

Communication is the process human beings understand what is said to them and the way they say or express their thoughts, needs and feelings to other people and this is mostly through speech. Although, when it comes to people with hearing impairment, sign language is inevitable. Thus, sign language is the most natural and effective way for communicating among deaf and other people. This study reviewed various schemes in the application of AI in the recognition and interpretation of sign language for machine and human understanding. This study revealed that numerous researchers have proposed and implemented diverse computer and android based application to aid learning and teaching sign language while others developed numerous machine learning algorithms and frameworks to sign language recognition system. Thus, this study established that artificial intelligence has greatly developed the teaching, learning and communication with sign language and obviously, artificial intelligence will be capable to resolve the future challenges that may arise in that regards.

One of the major drawback of our society is the barrier that is created between disabled or handicapped persons and the normal person. Communication is the only medium by which we can share our thoughts or convey the message but for a person with disability (deaf and dumb) faces difficulty in communication with normal person. For many deaf and dumb people, sign language is the basic means of communication. Sign language recognition (SLR) aims to interpret sign languages automatically by a computer in order to help the deaf communicate with hearing society conveniently. Our aim is to design a system to help the person who trained the hearing impaired to communicate with the rest of the world using sign language or hand gesture recognition techniques

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