PREFACE

In recent years, there has been a lot of interest in hand gesture recognition systems due to the diversity of applications that they have and their capacity to connect with machines in an effective manner via human computer interface. This thesis presents a review of current developments in the field of hand gesture recognition systems. Challenges posed by the gesture system are described, along with key topics pertaining to systems that recognize hand gestures.

Consider the most modern ways of recognition systems for postures and gestures. These have also been described. In addition, a summary of the study findings of hand gesture methodologies and databases, as well as a comparison of the primary stages of gesture recognition, is provided. Finally, both the benefits and downsides of the systems that have been described are broken down.

Rehabilitative treatment for hearing loss is required for almost more than 5 percent of the total population of the globe. It is anticipated that by the year 2050, approximately 700 million individuals, or one in every ten people, would have hearing loss severe enough to impair their daily lives. On the other hand, it seems that the estimate is about the same for persons who are silent. As of the year 2021, approximately 5 percent, or approximately 70 million, of the world's population was deaf and mute, according to the findings that were published in the world health statistics 2021 by the World Health Organization. However, only a portion of this number is able to communicate effectively using the appropriate sign language.

Hand Gesuture System using Machine Learning Algorithms – SVM (Support Vector Machine), YOLOv5, MobileNet – SSD by using Pycharm, Jupyter Notebook, Visual Studio, like CSV data, real open cv data. We also aim in future prediction and interface calling through an application with output showing more different gesture languages which can cover up the communication bridge between Deaf Blindness people all over the world. Overall, our study predicted the accurate gesture detection by two modes – By opening the camera, posing different signs and get detected. Second, a flask app which can detect the image of gesture by choosing the image which you want to predict.