

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY,  
BELAGAVI**



**A PROJECT REPORT ON  
“TECHNICAL TERM SIGN LANGUAGE  
RECOGNITION FOR THE DEAF AND DUMB”**

Submitted in partial fulfillment for the award of Degree of

**BACHELOR OF ENGINEERING  
IN  
COMPUTER SCIENCE & ENGINEERING**

By

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**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**

**CERTIFICATE**

This is to certify that the project entitled **"TECHNICAL TERM SIGN LANGUAGE RECOGNITION FOR THE DEAF AND DUMB"** has been successfully completed by

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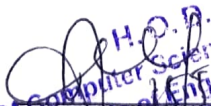
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the bonafide students of **DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING, ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2022-23. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project Work prescribed for the Bachelor of Engineering Degree.

  
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**DECLARATION**

**We,**

**GANESHA SHETTY**

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hereby declare that the dissertation entitled “**TECHNICAL TERM SIGN LANGUAGE RECOGNITION FOR THE DEAF AND DUMB**” is completed and written by us under the supervision of our guide **Mrs. Vidya**, Senior Assistant Professor, Department of Computer and Engineering, Alva's Institute of Engineering and Technology, Moodbidri, in partial fulfillment of requirements for the award of the degree **BACHELOR OF ENGINEERING** in **DEPARTMENT OF COMPUTER AND ENGINEERING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the academic year 2022- 23. The dissertation report is original and it has not been submitted for any other degree in any university.

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## ABSTRACT

Communicating between a deaf-mute and a typical person has never been easy. This essay examines various approaches used to lower communication barriers by creating an aid for people who are deaf-mute. The development of embedded systems has opened up opportunities for the design and development of sign language translation systems to help the hearing impaired people. The major goal is to create a real-time application for people with physical disabilities to support their communication in efficient ways. Sign language detection algorithms have the potential to greatly improve communication and accessibility for people who are hard of hearing. However, the output generated by these algorithms often contains technical terms and jargon that can be difficult for non-experts to understand. In this publication, we present a method for detecting technical terms related to sign language detection using natural language processing techniques. Our approach involves training a machine learning model to identify technical terms by analyzing a corpus of sign language detection research papers. We pre-process the text by removing stop words, stemming the remaining words, and converting all words to lowercase. We then use the text blob library in Python to extract noun phrases from the pre-processed text, which are likely to contain technical terms related to sign language detection. We manually annotate a subset of the noun phrases as technical terms or non-technical terms, and use this annotated data to train a machine learning model dependent on a support vector machine (SVM) classifier. We evaluate the performance of our model using a test dataset and demonstrate that it can accurately identify technical terms related to sign language detection with high precision and recall. Our method has potential applications in education and other fields where technical terminology can be a barrier to understanding. By automatically detecting and highlighting technical terms in sign language detection research, our method can help make this important area of research more accessible to a wider audience. We also go through the limitations of our strategy and some directions for further study.