

**A REPORT
ON
Indian Sign Language to Text/Speech translation**

Submitted by,

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Under the guidance of,

Mr. Likhith S R

in partial fulfillment for the award of the degree of

BACHELOR OF TECHNOLOGY

IN

COMPUTER SCIENCE AND ENGINEERING

At



PRESIDENCY UNIVERSITY

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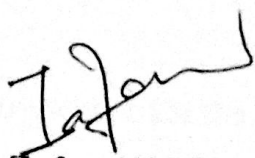
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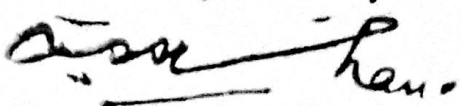
CERTIFICATE

This is to certify that the Internship/Project report “Indian Sign Language to Text/Speech translation” being submitted by “Hasan Raza B A , Chakradhar Reddy, Naheel N Akhtar, Nida Aiyman” bearing roll number “20211CAI0092, 20211CAI00156, 20211CAI0142, 20211CAI0085” in partial fulfillment of the requirement for the award of the degree of Bachelor of Technology in Computer Science and Engineering is a bonafide work carried out under my supervision.


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DECLARATION

I hereby declare that the work, which is being presented in the report entitled "**Indian Sign Language to Text/Speech translation**" in partial fulfillment for the award of Degree of **Bachelor of Technology in Computer Science and Engineering**, is a record of my own investigations carried under the guidance of **Mr. Likhith S R, Assistant Professor, Presidency School of Computer Science and Engineering, Presidency University, Bengaluru.**

I have not submitted the matter presented in this report anywhere for the award of any other Degree.

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ABSTRACT

Sign language is a crucial mode of communication for the deaf and hard-of-hearing community, employing hand gestures, facial expressions, and body movements to convey meaning. Indian Sign Language (ISL) is the primary sign language used in India; however, a significant communication gap exists between ISL users and those who rely on spoken or written language. To address this barrier, technology-driven solutions such as ISL-to-text/speech translation systems are being developed. These systems leverage artificial intelligence (AI), computer vision, and natural language processing (NLP) to recognize and interpret hand gestures, converting them into meaningful text or speech. Recent advancements in deep learning, gesture recognition, and wearable sensor technologies have significantly enhanced the accuracy and efficiency of ISL translation systems. These innovations not only promote accessibility and inclusivity but also empower individuals with hearing impairments by providing real-time translation tools for various domains, including education, employment, healthcare, and social interactions. By bridging the communication divide, ISL translation technologies play a vital role in fostering equal opportunities and seamless integration of the deaf and hard-of-hearing community into mainstream society.

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