A REPORT
ON

# SOFTWARE FOR INTERVENTION OF SPEECH & SOUND DISORDERS

*Submitted by,*

**Lingutla Rachana - 20211CSE0059**
**Metla Srinivas - 20211CSE0090**
**Rohit Bhunia - 20211CSE0092**
**G Lahari - 20211CSE0152**

*Under the guidance of,*

**Ms. Megala G**
**Assistant Professor**

*in partial fulfillment for the award of the degree of*

**BACHELOR OF TECHNOLOGY**

**IN**

**COMPUTER SCIENCE AND ENGINEERING**

**At**

GAIN MORE KNOWLEDGE
REACH GREATER HEIGHTS

**PRESIDENCY UNIVERSITY**

**BENGALURU**

**MAY 2025**

# PRESIDENCY UNIVERSITY

## PRESIDENCY SCHOOL OF COMPUTER SCIENCE AND ENGINEERING

## CERTIFICATE

This is to certify that the Internship/Project report **"SOFTWARE FOR INTERVENTION OF SPEECH & SOUND DISORDERS"** being submitted by "Lingutla Rachana - 20211CSE0059, Metla Srinivas - 20211CSE0090, Rohit Bhunia - 20211CSE0092, G Lahari - 20211CSE0152" 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.

**Ms. Megala G**
Assistant Professor
PSCS
Presidency University

**Dr. Asif Mohammed**
Professor & HoD
PSCS
Presidency University

**Dr. MYDHILI NAIR**
Associate Dean
PSCS
Presidency University

**Dr. SAMEERUDDIN KHAN**
Pro-Vice Chancellor - Engineering
Dean –PSCS / PSIS
Presidency University

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## DECLARATION

I hereby declare that the work, which is being presented in the report entitled "**SOFTWARE FOR INTERVENTION OF SPEECH & SOUND DISORDERS**" 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 **Ms. Megala G, 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.

**Lingutla Rachana - 20211CSE0059**
**Metla Srinivas – 20211 CSE0090**
**Rohit Bhunia - 20211CSE0092**
**G Lahari - 20211CSE0152**

# ABSTRACT

Speech and sound disorders affect individuals of all ages and can significantly hinder communication, learning, and social interaction. Early diagnosis and consistent therapy are crucial for improvement, yet access to professional speech therapy remains limited, especially in remote and underserved regions. This project, titled Software for Intervention of Speech & Sound Disorders, aims to bridge this gap by providing an intelligent, user-friendly, and accessible software solution to assist individuals with speech and sound disorders.

The proposed system leverages speech recognition, signal processing, and artificial intelligence techniques to analyze the user's speech in real time. It identifies deviations from standard pronunciation, fluency issues, and articulation problems. The software includes personalized therapy exercises, interactive modules, and gamified learning activities designed to enhance user engagement and encourage consistent practice. Real-time feedback and visual cues guide users toward correct speech patterns, while progress tracking and report generation assist therapists in monitoring improvements and adjusting therapy plans.

Built with Python, NLP libraries, and speech processing tools, this software is scalable, supports multilingual speech therapy, and can be used independently by users or as a supplementary tool by speech therapists. Ultimately, this project aims to make speech therapy more inclusive, efficient, and affordable, contributing to improved communication skills and better quality of life for individuals with speech and sound disorders.