

# **Real Time Speech to Sign Language Translation**

**Sneha Anil Jagmalani<sup>1</sup>, Dhanashri Anant Petkar<sup>2</sup>, Shruti Rajesh Waychal<sup>3</sup>,**

**Revati Ramesh Salokhe<sup>4</sup>, Prof. Dr. Ganesh V. Patil<sup>5</sup>**

Students, CSE (Data science)<sup>1,2,3,4</sup>

Head of the Department, CSE (Data Science)<sup>5</sup>

DY Patil College of Engineering & Technology, Kolhapur, India

**Abstract:** *The project "Real Time Speech to Sign Language Translation" focuses on building a communication bridge between hearing individuals and the speech or hearing-impaired community by translating spoken language into sign language in real-time. It promotes inclusivity and accessibility by allowing seamless interaction and understanding across different modes of communication. Key features of the system include real-time speech detection, dynamic translation into accurate sign gestures, and user-friendly visual outputs to represent sign language clearly. The system is designed to handle basic to moderately complex sentences and can be used in various day-to-day settings like classrooms, public places, and workplaces. Overall, the project empowers the hearing-impaired community while encouraging empathy and awareness in society.*

**Keywords:** Hearing-impaired, real-time speech translation, American Sign Language, Speech Recognition, NLP, Sentiment Analysis, ASL Gestures, Emotion Detection

