Braille To Speech Conversion for Disabled Person Using Python and Image Processing

Prof. Dr. V. V. Rathi[1], Ajinkya Thakare[2], Adhishri Chimote[3], Shrutika Wankhade[4], Surabhi Chaturbhuj[5]

Professor, Department of Electronics & Telecommunication Engineering[1]

Students, Department of Electronics & Telecommunication Engineering[2,3,4,5]

SIPNA College of Engineering & Technology, Amravati, Maharashtra, India

Abstract: *Visually impaired individuals often rely on Braille for reading and writing, but converting Braille to speech can further enhance their communication abilities. This project presents a Braille-to-speech conversion system using Python and image processing techniques. The system captures Braille characters through a camera, processes the image to recognize Braille patterns, converts them into text, and uses text-to-speech (TTS) technology to generate speech output. The proposed solution is affordable and efficient, leveraging open-source technologies to improve accessibility for the visually impaired*

Keywords: Braille, Speech Conversion, Image Processing, Python, Text-to-Speech, Visually Impaired