

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY,
BELGAUM - 590016**



A Project Report on

**"Multi-modal Interfaces for Interactive Communication between
Hearing and Visually Impaired Individuals"**

**in partial fulfilment of requirements for the award of the degree of Bachelor of Engineering in
Computer Science & Engineering of the Visvesvaraya Technological University, Belgaum.**

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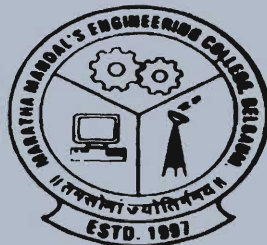
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ABSTRACT

Now a day's human interaction with computer system is growing day by day with new technologies. It is easy for one person to interact with the computer system and communicate with another person. But for blind person it is not easy to interact with the computer system, and it is not helpful for the blind person to communicate using computer system. The main challenging problem is communication between blind and deaf individuals, there is no any free of cost application which helps for blind and deaf people to communicate with each other.

This system aims to provide alternative tools and interfaces to blind and deaf-and-mute people and enable their communication and interaction with the computer. All the involved technologies are integrated into a interactive application that is jointly used by the blind and deaf-and-mute user. The integration of the multimodal interfaces into a application here serves both purposes as a communication mean and,an easy entertainment. The proposed application integrates haptics, audio, visual output, analysis and synthesis, speech recognition and synthesis, in order to provide an interactive environment where the blind and deaf-and-mute users can communicate with each other.