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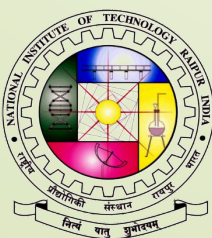
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Buddy App: Virtual Assistant For Old Aged And Visually Challenged People

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Abstract



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Abstract:The modern world has made daily living more intelligent and technologically connected. People who are visually impaired or old aged faces numerous challenges while using ... **View more**

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Abstract:

The modern world has made daily living more intelligent and technologically connected. People who are visually impaired or old aged faces numerous challenges while using the new technologies. In this work, we proposed a virtual voice assistant app called "Buddy App" to help them with their day-today activities. It receives vocal responses as input, speaks the output, and displays the text onto the screen. It receives the voice commands through our microphone and converts it into computer understandable language using speech recognition technology. Then it gives the voice output using text to speech conversion technique. Giving instructions verbally is advantageous for both normal and visual impairments persons who are unable to input data using a keyboard. The main agenda of our research is to improve the lives of visually impaired people and elderly persons who are unable to use modern technology. The proposed device is developed using natural language processing, speech recognition, and text to speech. Users were provided 12 different questions based on various categories like web search, news, music, weather, basic tasks, changing voice and command history that they were supposed to ask Buddy App. The evaluation of the results of the survey was based on user's satisfaction like whether the users are getting desired output to their queries or not. The model is tested on 100 people including 25 visually challenged and 75 normal people with an success rate of 96.25%.

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I. Introduction

Visually challenged people deal with numerous challenges on a daily basis. According to the World Health Organization (WHO), close vision impairment affects about 2.2 billion people worldwide. 49.1 million of them or people have vision impairments. 87% of the blinds are in developing countries and unfortunately, India leads. In India and other underdeveloped nations, there is currently no suitable system that enables a blind person to live a fulfilling life despite their restrictions [1].

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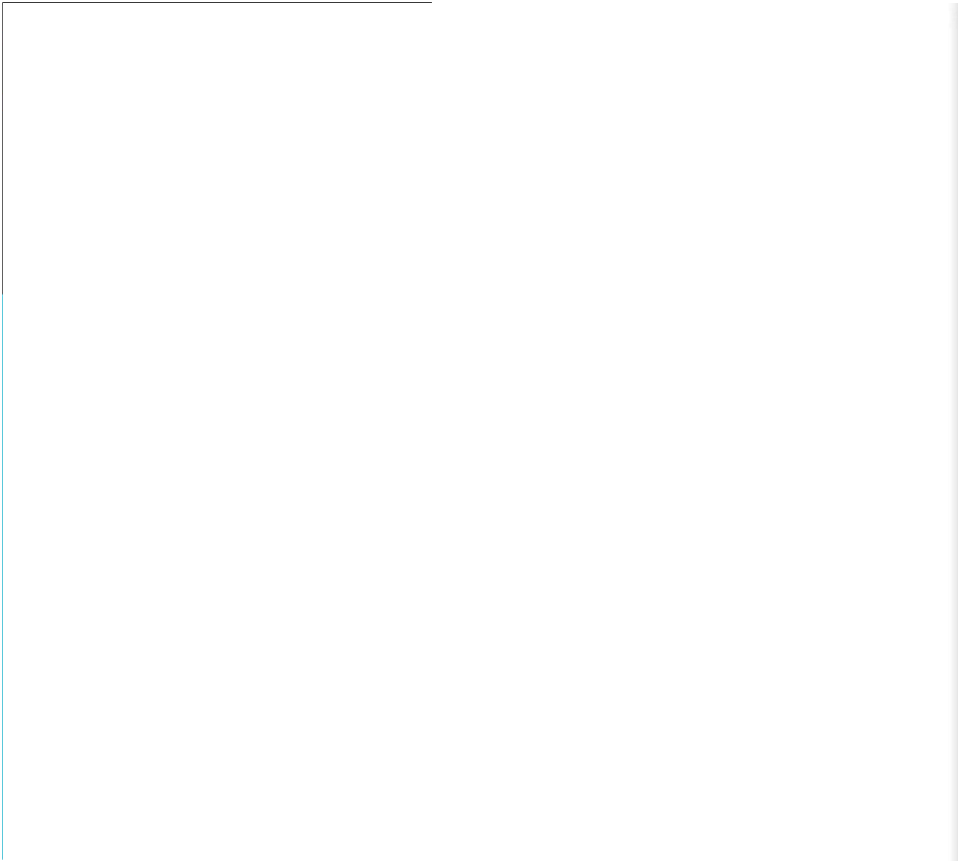
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The modern world has made daily living more intelligent and technologically connected. People who are visually impaired or old aged faces numerous challenges while using the new technologies. In this work, we proposed a virtual voice assistant app called "Buddy App" to help them with their day-to-day activities. It receives vocal responses as input, speaks the output, and displays the text onto the screen. It receives the voice commands through our microphone and converts it into computer understandable language using speech recognition technology. Then it gives the voice output using text to speech conversion technique. Giving instructions verbally is advantageous for both normal and visual impairments persons who are unable to input data using a keyboard. The main agenda of our research is to improve the lives of visually impaired people and elderly persons who are unable to use modern technology. The proposed device is developed using natural language processing, speech recognition, and text to speech. Users were provided 12 different questions based on various categories like web search, news, music, weather, basic tasks, changing voice and command history that they were supposed to ask Buddy App. The evaluation of the results of the survey was based on user's satisfaction like whether the users are getting desired output to their queries or not. The model is tested on 100 people including 25 visually challenged and 75 normal people with an success rate of 96.25%.

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 **Contents****I. Introduction**

Visually challenged people deal with numerous challenges on a daily basis. According to the World Health Organization (WHO), close vision impairment affects about 2.2 billion people worldwide. 49.1 million of them or people have vision impairments. 87% of the blind are in developing countries and unfortunately, India leads. In India and other underdeveloped nations, there is currently no suitable system that enables a blind person to live a fulfilling life despite their restrictions [1].

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