

Facial Recognition Enabled Voice assistant

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by

Parampreet Singh(18106050)

Under the guidance of

Dr. Dilbag Singh



**DEPARTMENT OF INSTRUMENTATION AND CONTROL
ENGINEERING**

**DR. B R AMBEDKAR NATIONAL INSTITUTE OF
TECHNOLOGY JALANDHAR-144011, PUNJAB (INDIA)**

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ABSTRACT

The idea of this project is to build a personal voice assistant based on Speech Recognition. Nowadays, Speech recognition technology is being used to replace other, more 'tired' methods of input like typing, texting and clicking. The ability to talk to our systems have expanded to encompass most of the technology we use in our daily lives. Tapping into the historical background of speech recognition software, the first successful speech recognition was developed by the Bell Laboratories and was named as AUDREY. This system was able to recognize only the 9 digits spoken by the developer if the voice included pauses between them.

The next real advancement was IBM's SHOEBOX which was able to recognize and differentiate between 16 different words. After this came the invention of HARPY, a system that was able to recognize over 1000 words. Improving upon these inventions, researchers finally invented Natural Language Processing and modern speech recognition systems like Google Assistant and Alexa. Deriving inspiration and knowledge from these systems, this personal virtual assistant for computers was built.

Stepping towards the corporate life, While focusing on essential business processes of the organization, spending time on these repetitive tasks seemed redundant. Not only does this software increase productivity, but speech recognition software nowadays captures input much faster than a human's average typing speed.

Before taking commands, the system opens the camera and performs real-time facial recognition of the user. If the authentication passes and the user is valid, the system proceeds with taking commands, otherwise, an error page is displayed. In this modern world, easy to use systems are highly popular, taking this into consideration, an interactive UI is created for this project.