Real-Time Communication System Powered By AI for Specially Abled

INTRODUCTION

The technology is developing day by day but no significant developments are undertaken for the betterment of these people. Communications between deaf-mute and a normal person has always been a challenging task. It is very difficult for mute people to convey their message to normal people. Since normal people are not trained on hand sign language. In emergency times conveying their message is very difficult. The human hand has remained a popular choice to convey information in situations where other forms like speech cannot be used. Voice Conversion System with Hand Gesture Recognition and translation will be very useful to have a proper conversation between a normal person and an impaired person in any language.

GOALS OF THE ARCHITECTURE

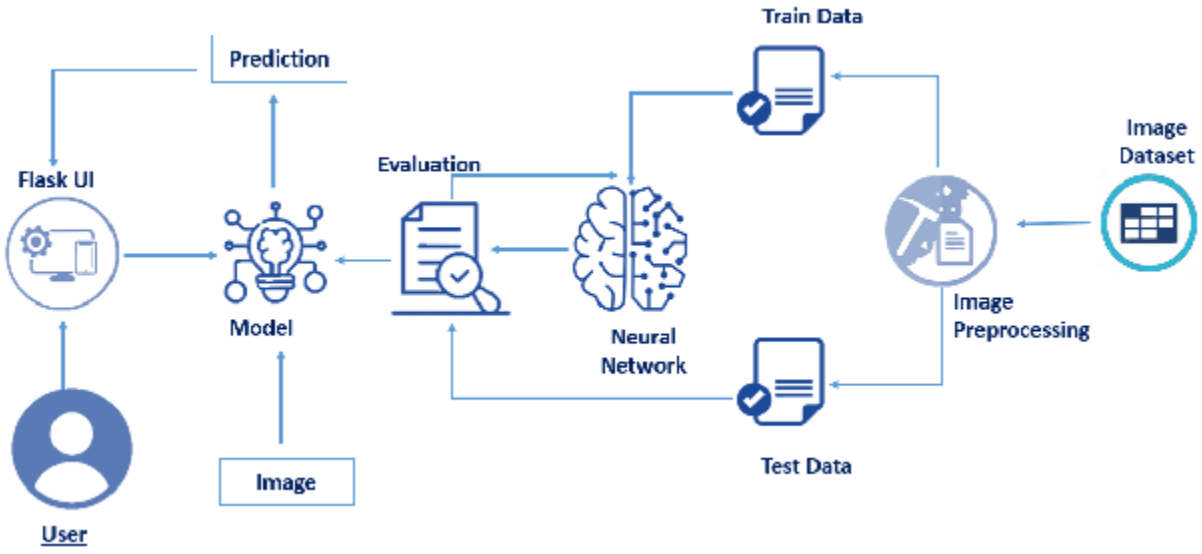
The project aims to develop a system that converts the sign language into a human hearing voice in the desired language to convey a message to normal people, as well as convert speech into understandable sign language for the deaf and dumb. We are making use of a convolution neural network to create a model that is trained on different hand gestures. An app is built which uses this model. This app enables deaf and dumb people to convey their information using signs which get converted to human-understandable language and speech is given as output.

QUALITY OF SERVICE REQUIREMENTS

Artificial intelligence (AI) refers to smart machines or algorithms that are capable of performing cognitive tasks usually made by humans. This includes different

technology solutions that mimic humans and use logic from playing chess to solving equations. Machine learning is one of the technologies that is part of AI: when algorithms are exposed to more data, they can learn and improve from it in order to anticipate consumers' needs. For example, Google uses machine learning: its algorithms collect what Internet users searched and what they liked on social networks in order to provide more personalized search results and recommendations.

TECHNICAL ARCHITECTURE



Conclusion

This model is implemented using agile methodology. This is Minimum Viable Product architecture.