

MAKER: Face Recognition for the Blind

Dr. Hugh Jack P.E., Western Carolina University

Dr. Jack is not the author. This abstract has been submitted on behalf of Pranav Dheer, Anurag Sarkar - VIT University, Vellore, India.

Face Recognition for the Blind

Authors:

Pranav Dheer, Anurag Sarkar

VIT University, Vellore, India

Abstract

Often blind people find it hard to fit in the fast moving society. They are deprived of the gift of sight. We aim to remove this problem. Our product will take a step forward in revolutionizing the way the world is described to them. The project is to make smart goggles for the blind that interacts with the user. The camera module is connected to the goggles and the processing is done by an inbuilt processor. The image from camera module is taken as an input which is processed and filtered by various algorithms to segregate most useful features and thereby identifying them for the blind person. One of the objectives served by the processor is face recognition if a known face comes in front of the user his name is given as voice output from the earphones attached to the microprocessor. A relatively new concept can be introduced of saving unknown photos catering to user voice command, to create an extensive database. The goggles are activated by a push button and serve the needs of the user. It also acts as a smart assistant interacting with the user and serving basic needs like temperature and time fetching. We have implemented various images for the goggles to recognize, our database consists of approximately 80,000 images. We have also implemented a summary generative function which can describe the image as a whole to the user including the basic understanding for nearest feature available to the user.