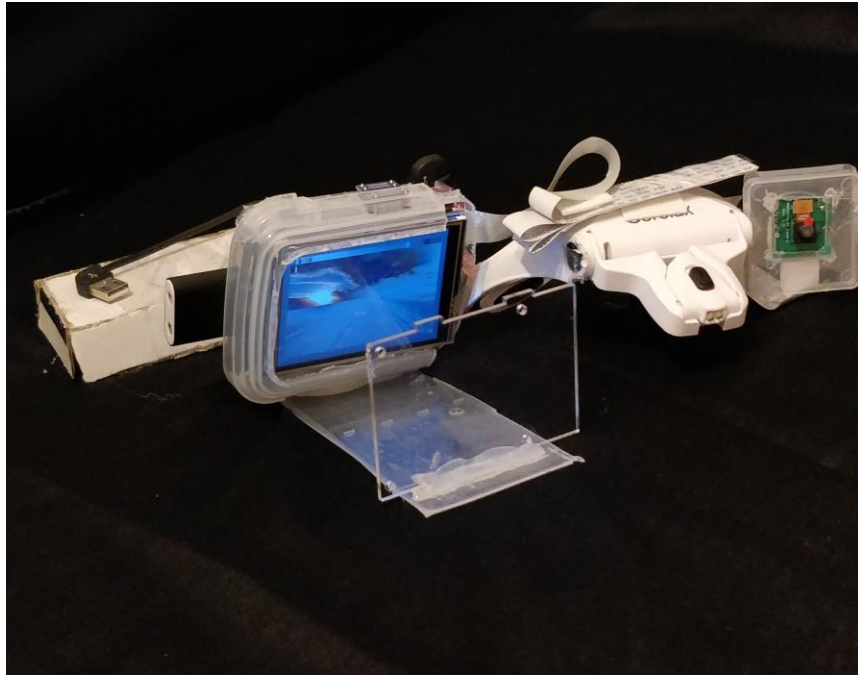


The concept of visual future: smart glasses using Raspberry Pi



The main aim of this project is to place computers' and smartphones' content in the user's field of view or ears. The content includes augmented reality, talking system, heads-up displays, and secure connection. Instead of looking at a rectangular screen, we will see words, pictures, objects and virtual environments by simply looking around. Many of the devices which is available in the market have almost the same features like access message, calls, tracking locations and provide GPS maps navigation. The project came up with different features that do not exist at least in the market yet, but few people who have been working with it, because it is difficult to find the software sources that can support this kind of project. The main features include image detection, American sign languages and voice assistant.

The practical part of this smart glasses project contains two sections, hardware, and software. The hardware section requires physical equipment, such as a talking system that includes a Raspberry Pi 3 board, micro SD card, mini speaker, USB micro, SD card reader, and jumper wires. A display system will include a mirror, lens, camera, sensors, Bluetooth, GPS, Wi-Fi, CPU, LiPo battery, LCD display and a charge circuit. All the hardware components will be implemented inside a 3d printed case and glasses. Software section contains the programming codes' files based on the Python language.

The aim of this project to allow users send and answer messages and phone calls, access a phone's applications using a voice system, manage calendar and get pop-up reminders at the same time when displaying the operation for users.

This project bases on the same idea as other smart glasses, but with special features. The basic idea is to implement the programmable hardware with 3d replacement case, then it can be attached to any kind of glasses (eyeglasses or sunglasses). Also, it can be used by different users, such as adults, kids and the handicapped.