

Reading Glasses for the Blind (RGB)

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For those people who have been created differently, in their own way, personalities, even with their own needs, they may suffer most from what they have been denied, but they are humans whom live, study and work just like everyone. God took away their ability to see, and gave them a warm widely open soul, the ability to feel us, and hear our whispers. They do not need us but need our love and support. They are not handicapped, God created them with special needs which we have to help overcome. Because of these reasons, the idea of the project comes to help this category of our society to live a normal life without feeling a deficiency. All inventions and mobile applications are useless for the blind people because the constant voice in their ears is harassing them and they are more dependent on their senses. So, we decided to use the available technology in something they really could benefit from, which is reading.

The project used a small, low cost, hand-sized integrated computer with a connected camera to scan the text and turn it into a voice heard by the blind as they please. Reading glasses for the blind (RGB), the project is intended to be the first assistant to the blind people in the reading process, the project is capable of reading both Arabic and English texts, thereby giving them the ability to actually read which will aid them in their personal life whether they are reading for entertainment or reading for education purposes.

This project will implement image processing and optical character recognition algorithms to recognize texts and convert them into sound using Python language as a software tool and Raspberry Pi with its camera module as the hardware. The system will be able to detect and recognize texts in different situations and conditions.