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Visual Acuity Test using Virtual Reality Android Application

A dissertation By

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Abstract

The eye refractive errors are a common problem in today society. Myopia is the major refractive issue most of the people have also known as visual acuity issues. Even the small children are having refractive errors from the birth but the dangerous side of the refractive errors is, the refractive errors are most of the time never feel to them. From that case, your vision is turning to poor day by day. Identifying the Myopia and other refractive errors at the early stages of the, it has higher possibility to solve them without any surgeries.

To identify the refractive errors, they have to check their visual acuity at least every year. Because these issues can occur at any age. But most of the people are not interested in their visual acuity. The main reason for that is they don't have time to spent in clinics and hospitals until they don't know they have an issue in their eyes. To solve this problem author introduced a system, Virtual Reality Visual Acuity Testing Android application (VR EYE). This application consists of Virtual reality application for visual acuity testing, Android application for show the visual acuity result, recommendation and get instruction from doctors and optometrists and another android application for doctors to give instruction for patients who send their visual acuity results to them.

The evaluation of the system was done by the domain experts who are in the medical field and software industry with a demonstration of the prototype. To test the accuracy, system tested with six users with respect to their visual acuity tested by an optometrist.

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Visual acuity testing, Virtual Reality, Eye testing using VR