

Computer vision based application to Help color-blind people

### Introdaction

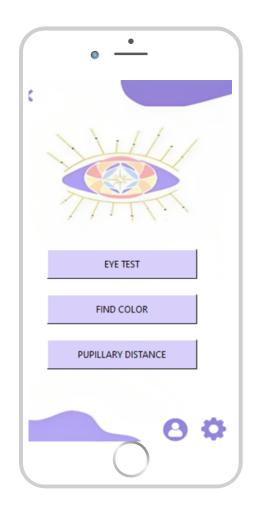
Color blindness is the decreased ability to see color or a difference in color it difficult to differentiate between the colors of traffic signals, decide what to wear, has many types:

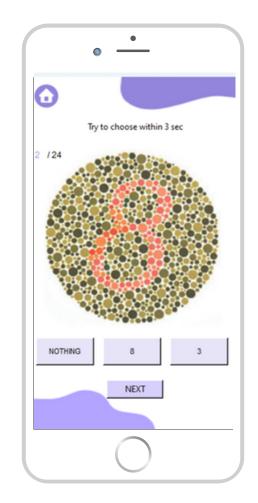
- 1. Cannot distinguish between different shades of red and green
- 2.Cannot distinguish between different shades of blue and yellow
- 3. Total color blindness (black and white) The disease can be detected through a test for people with color blindness.

# Objectives

- Testing and helping people with color blindness in their daily lives
- Color recognition by camera.
- Measure the distance between the pupils to ensure that the glasses lenses are in the ideal position.

### Interface

















# Abstact

**10M colors** is an application works based on computer vision and machine learning techniques to identify colors and provide users with real-time results about color names and degree models. Also, it provides other services such as people who need to take a color-blindness test to find out if they have color-blindness or not, who want to measure their pupillary distance to ensure that the eyeglass lenses are in the ideal position.

## Methodology

Requirements definition

System and software design

> Implementation and unit testing

Integration and system testing

> Integration and system testing

### Tools















### Conclusion

We completed all stages of project development, which opened our eyes to think about the lives of the people around us how they live their lives, and how they see the world. We hope that we can provide even a small help to color-blind people in their lives. Through our various services (find the color, pupillary measurement, and color blindness test).



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