# RGB Color Detection App for Color-Blind

Color blindness affects a large part of the human population. The two most common types of hereditary color blindness, Protanopia and Deuteranopia are red-green vision defects caused by the lack of red or green retinal photoreceptors, respectively. 8% of men and 0.5% of women, or around 12 million Americans, are at least partly blind in color. Unfortunately, career decisions will affect the condition. "Medicine, electricians, pilots, truck drivers, cooks, fashion, and many other professions where people don't even know that there's a problem," says Dr. Mark Changizi, a neuroscientist and 2AI Labs inventor of color blindness corrective lenses. In addition, a color-blind person faces a regular problem going for shopping or buying dresses as they have to pick their own color. They have a very difficult time identifying the color at that moment. The most common color-blind problem is between the types Red, Green and Blue.

To solve this problem, I used AI builder PowerApps to develop an RGB (Red, Green, and Blue) Color Detection App. In this app, I collect various color object images as a source of data input, and train the model to make the system recognize color objects in red, green and blue. Now a days, Artificial Intelligence (AI) systems are used to model human intelligence for either problem-solving or decision-making. AI offers the benefits of permanence, efficiency and cost-effectiveness while also addressing complexity and speed in either resolving an issue or making a decision. I have made it a simple, user-friendly and reliable app for everyone, particularly the elderly, who have less technical knowledge of using devices. A color-blind person simply has to capture the picture for this app and then the app will include the right color information with a percentage value for detection. Higher the percentage of color, higher the detection accuracy for that object.

I am planning to develop this app in the future not just for the color-blind but also for the blind. I will try to integrate an AI feature in the app to notify them with a sound system by informing blind people the color of the item while they go shopping alone. I'll strive to have better specificity for color object recognition for color blind people.