

MacuLAR

Agochiya, Priyanka (School: Olentangy High School)

MacuLAR is a product designed to enhance the vision of a macular degeneration patient. While macular degeneration is an incurable disease which causes the macula to deteriorate and the patients to lose their central vision, MacuLAR can help the patients see everything in their sight even with a blind spot that serves as their obstacle. In the software of this product, MacuLAR takes the view of the patient, readjusts the view, and moves it to the outside of their blind spot. Therefore, the patient can see everything, even with the blind spot since everything would be surrounding it. The user will be able to fine-tune the adjustments. This product was created with two software programs, Unity and Xcode. Unity is a gaming program that is used to design games for virtual and augmented reality. Xcode is a MacOS software that allows application developers to create applications for Apple products. Unity was used to create the actual design and function of the application. Xcode was used to convert that software into an iPhone application. When the conceptual product was developed, it needed to be tested in a real-world application. Hence, a study was conducted at Willow Brook Christian Village to test the feasibility of the product. When the study was conducted, it could be clearly seen that more than two-thirds of the elderly people surveyed were willing to use the product on a daily basis. Therefore, the product, MacuLAR, is a product that is feasible and can be the future of macular degeneration treatment and improve senior life.