

Selective Dynamic Glare Blocking Eyewear

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Abstract

Glares faced at night from oncoming vehicles cause temporary blindness and prevention in visible surroundings. The presented invention is an eyewear that selectively blocks the glare portion in the wearer's field of view using LCD-based localized darkening, which maintains overall visibility while blocking only the glare. This uses a camera and processing system to precisely locate and dynamically obscure the glare source. This combination of real-time glare detection and COG LCD localized dimming in wearable eyewear seems not present in existing commercial solutions. Users reported at least 50% reduction of the glares while being able to see the surroundings. This system is manufactured with available LCD, microcontroller, and lens integration technologies.

Keywords

Glare reduction, Selective eyewear, Visual comfort, Optical innovation, Road safety.

Biographies

Deshna Sharma is a student at Jayshree Periwai International School, class of 2027.

Mr. Aakash is the founder of Aha 3D innovations which was incorporated on 25th May 2010 in Jaipur, Rajasthan and is renowned for their innovative products. Under his leadership, the company made India's first indigenous 3D printer and their 3D printers were used in prototyping of Chandrayaan's components. They also have several inventions and products in Medical 3D printing, personal protective equipment and Automotive control systems. Their presence in the team boosts the viability and scaling of this project.