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Title:	Glare Cancellation System for Vehicles and Aircraft
Author(s):	Khare, Niharika
Supervisor(s):	Venkatesh, K S
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Abstract: The intense glare from the head lights of oncoming vehicles causes a temporary blindness and thus poses a serious threat for drivers during night time. It has been a major concern in the road safety of drivers and motorists since many years. The proposed system is a programmed hardware device which mitigates the glare from the head lights of the oncoming vehicles and thus reduce the risks of road accidents during night driving. The system comprises of transparent LCD screens, in front of the viewer's eyes, whose display is controlled to selectively block the glare when the glare is seen by the viewer. The regions of high intensity glare in the scene are detected by the two front cameras. The group of pixels corresponding to the detected glare regions are darkened on the LCD screen through a microcontroller. The location of glare regions are further modified corresponding to the movement of the eyeballs of the viewer. The later phenomenon is met through the third camera which tracks the eyes of the viewer and helps to get the final location of the dark regions on the LCD screens to block the glare. Also, the opacity of LCD screen is controlled to deal with the glare sensitivity that depends on the ambient light conditions.

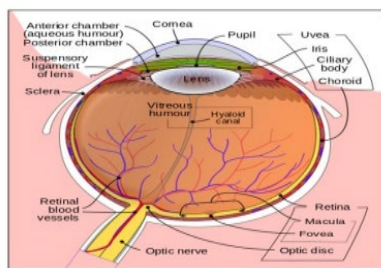


FIGURE 3.2: The Human Eye.



FIGURE 5.1: Hardware setup.

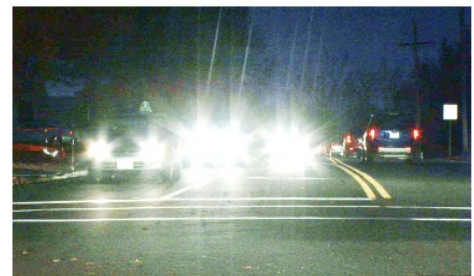


FIGURE 1.1: Glare effect during night driving.

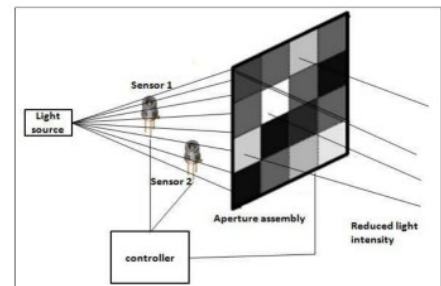
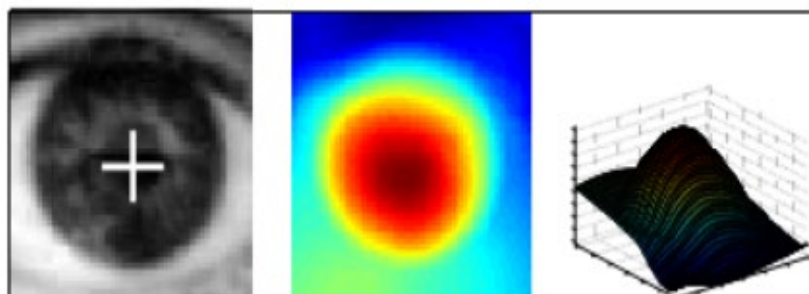


FIGURE 2.2: The system architecture