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(57) Abstract :
The eye gazing wheelchair is a one-of-a-kind technology that is usually used by those who are completely immobile. Automated wheelchair control, which is controlled by ocular movement, replaces manual wheelchair control in this technology, allowing patients to feel and navigate with less or no effort. A continuous picture is captured by a camera, which is then subjected to different image processing algorithms. The Haar cascade method is used to identify the location of the eye pupil, and the image processing methodology ensures that the wheelchair travels appropriately. The wheelchair wheels have a DC motor attached for convenient maneuverability. The ultrasonic sensor is installed on the wheelchair and detects any obstructions while it is moving, causing the wheelchair to stop. Wearing a wireless device with one or more accelerometers on the patient to monitor patient mobility, recognize a fall based on observed motions, and immediately request assistance for the patient if needed is one technique to automatically acquire aid for a patient. A wheelchair-assist robot is investigated, as well as systems, technologies, and tactics for supporting a wheelchair user with daily duties or activities at work, at home, and elsewhere. A wheelchair interface component on one version of the mobile wheelchair-assist robot exchanges and controls information with a wheelchair controller. A wheelchair-assist robot mount assembly, for example, is used to electronically and physically link a wheelchair-assist robot to an accompanying wheelchair.

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