

Owl Vision

Abstract

Owl Vision is a device system that utilizes affordable hardware in order to give users the opportunity to experience a remote environment. The system uses virtual reality technology to bring outside experiences to a user who cannot go outside, whether it be due to a chronic or long-term illness or disability. Owl Vision works by streaming wide-angle video and audio input through a Raspberry Pi and transmitting it to YouTube. Because the video is not a full 360° view, the camera is mounted on servo-motors to control the angle of the footage. This Raspberry Pi subsystem is mounted on a robot that follows an individual as they walk around outside. This robot follower is driven by an Arduino microcontroller and has the sensors necessary to follow an individual from a distance. The user inside views the video stream in the YouTube application using an Android device inside a Google Cardboard viewer.

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