Deer Alert: A System to Reduce Deer-Related Crashes Using Motion Sensors in Areas with High Deer Traffic

Labows, Lauren (School: Dr. James A. Forrest Career And Technology Center)

Deer related accidents are a major cause of crashes and deaths in the U.S. Humans are being severely impacted by these accidents, physically and financially. This system aims to decrease the number of these accidents by alerting drivers when deer are near the road and giving them time to slow down enough to decrease the probability of a crash. The Deer Warning System uses an Arduino microcontroller with code that can connect two or more motion sensors to four LED lights that are attached to pre-existing Deer Crossing signs. The sensors can be strategically placed in the surrounding area to most effectively detect nearby deer. Testing included a human walking at a slow pace in front of the sensor in different light conditions to simulate a deer. The prototype can detect movement and trigger flashing lights attached to a "Deer Crossing" sign. The reaction is almost immediate in daylight, and slightly delayed in the dark. In testing, false alarms caused by objects in a woodland setting were nonexistent. The Deer Warning System prototype was a success, it detects motion and alerts drivers to slow down with little issue. The prototype shows that a full scale version could be created to be used effectively on actual roads to decrease the number of deer related crashes.