ECE Capstone program  
Spring 2018  
Project Abstract & Info

Please provide the following information to be shared with on capstone information exchange platform:

**Project number:** S19-52

**Project title (as will appear on the poster):** Raspberry Pi Controlled Headlights

**Team members:** Santos Tapia, Kevin Matute, Daniel Yates, Amina Bright

**Adviser(s) name(s):** Mr. Caggiano

**Up to 5 keywords that will help to classify the project scope:** Headlight, Smart, Raspberry Pi, Image recognition, Image processing.

**Project abstract (up to 250 words) to be shared with judges:**

The objective of the project is to provide drivers with a lighting solution that will result in a safer environment when driving at night. Given the circumstances dangerous driving scenarios can present itself in a matter of seconds due to blinding high beams given off by other drivers. This will be achieved by utilizing OpenCV on a raspberry pi to do image processing to determine where there are headlights and how far the light source may be from the camera. Then a motorized system also controlled by the pi will change the angle at which the headlight is being projected thus not blinding other drivers oncoming or in front of the vehicle. This system will respond to stimuli in real time and we hope that it will serve as a more affordable solution to a feature offered in many up and coming luxury cars.