

**ECE Capstone program
Spring 2018
Project Abstract & Info**

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

- 1. Project number:** 56
- 2. Project title (as will appear on the poster):** Cool Fire Alarm
- 3. Team members:** Melvin Pastrana, Xi Chen, Matthew Darocha
- 4. Adviser(s) name(s):** Prof. Michael Caggiano
- 5. Up to 5 keywords that will help to classify the project scope:**
smoke detector fire alarm IoT
- 6. Project abstract (up to 250 words) to be shared with judges:**

Never leave your home unprotected. Through photoelectric smoke detection and WiFi transmission, fire safety can extend to cellular devices. Using Maxim Integrated's photoelectric smoke detector in combination with Espressif System's ESP32 SoC, we can improve the overall functionality of the common smoke detector. These components allow for a complete smoke detecting fire alarm solution with a relatively small PCB footprint and cell phone connectivity. Our application uses a 9V battery to power the device and hopes to have a battery life of 1-year*. The Cool Fire Alarm™ attempts to take advantage of relatively new, commercially available integrated components to provide an low cost fire alarm with an extended wireless alarm service.

*Battery life is only an estimate that is still subject to change based on testing