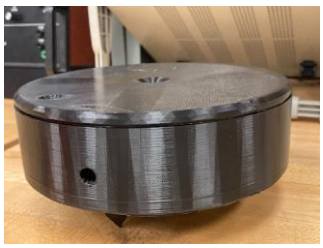
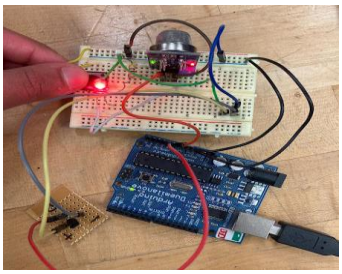
MECHATRONICS RESEARCH LAB

FOREST FIRE MONITOR (FFM)

The Forest Fire Monitor (FFM) will help in Preventing catastrophic forest fires through the means of semi-autonomous machinery is the next step in preventing the loss of life and property. By using many sensors, high-risk areas such as forests can be monitored to avoid and alert firefighters of such dangerous, natural disasters. Multiple medium-sized, portable monitors will be dropped off by fire crew in various locations, such as dense forests and open fields, anywhere that is at risk of or susceptible to, forest fires. These machines will be battery operated, allowing for long durations of data gathering. Once dropped off and activated, these machines can last a long time, collecting and sending data. Using Arduino microcontrollers with a future satellite connection, we will be able to control and monitor the collected data. Sensors will measure heat, and gas types/levels, alerting authorities if there is any unusual activity. In the future, there will also be Arduino C software, integrated into the machine, allowing for firefighters to ping its location and receive real-time data and warnings. Once the devices have lost power, or the ability to perform, they can be reused and/or replaced. This invention allows firefighters to stop and avoid such catastrophic fires before they even happen. This will help mitigate the loss of life, wildlife, the environment, and property. In the future, more adjustments will be made, and new features will be added to this invention so that we can increase safety and decrease the danger of forest fires.



FFM Completed



Arduino Electronics System

INNOVATORS

- Wilson Dhalwani (AEDT)

AWARDS

3rd Place in Environmental Research

RESEARCH CATEGORIES

- Engineering Res.
- Computer Science
-Environmental Res.
-Preservation Res.