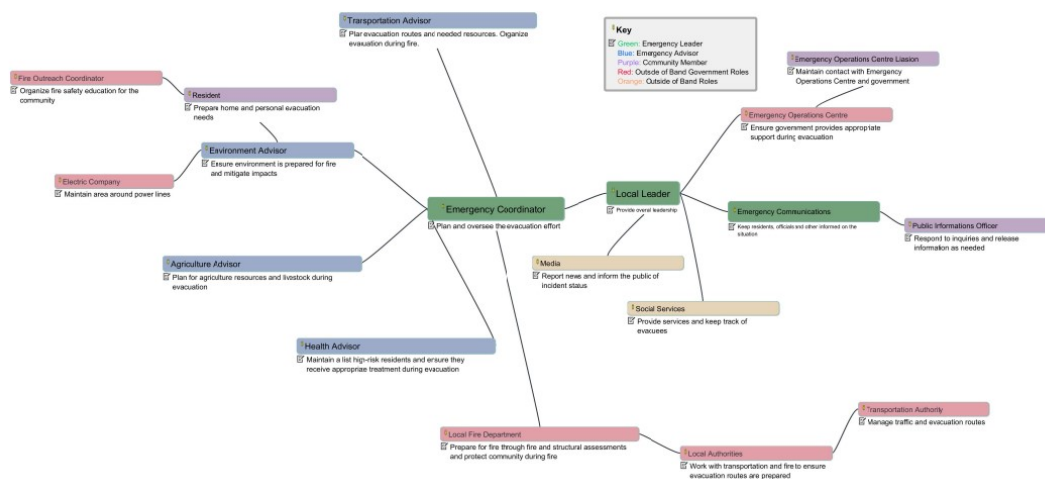


## Undergraduate Research Assistant — Wildfire Preparedness in Indigenous Communities

- Reviewed previous indigenous evacuations and case studies to add to a comprehensive list of tasks for wildfire evacuation.
- Sorted over 100 tasks into roles and timelines, including the communication needed between roles
- Created an interactive web app with React that makes the research data easily accessible and digestible for communities to aid in evacuation preparedness

### Mind Map of Role Interaction



### Web App

#### Wildfire Preparedness



Clickable map with icons for each role (prototype image above) that will direct to a page with further tasks

#### Wildfire Preparedness

Back

#### Residents



#### Tasks: During the Fire



SHOW ALL

3. Place valuables in vehicle if possible to be prepped for quick departure

Clickable timeline and icons for residents to go through and understand specific tasks and order they should be preformed

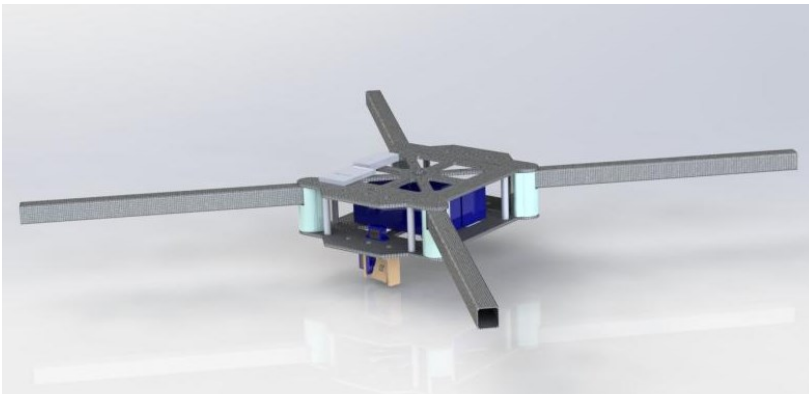
# Brielle Chenier

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## WARG 2022 Competition Drone

- 4kg drone capable of carrying 2kg payload
- Designed in SolidWorks and prototype made with laser cutting fiber board, final design made with carbon fiber
- 3D printed brackets for arm to keep them rigid during flight as well as distribute battery load
- Attachment spots for camera gimbal, grabber and electrical components

### Early Version



### Final Version

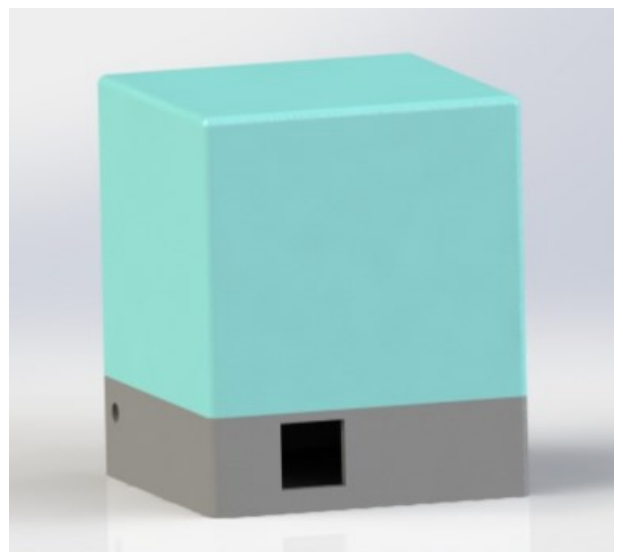
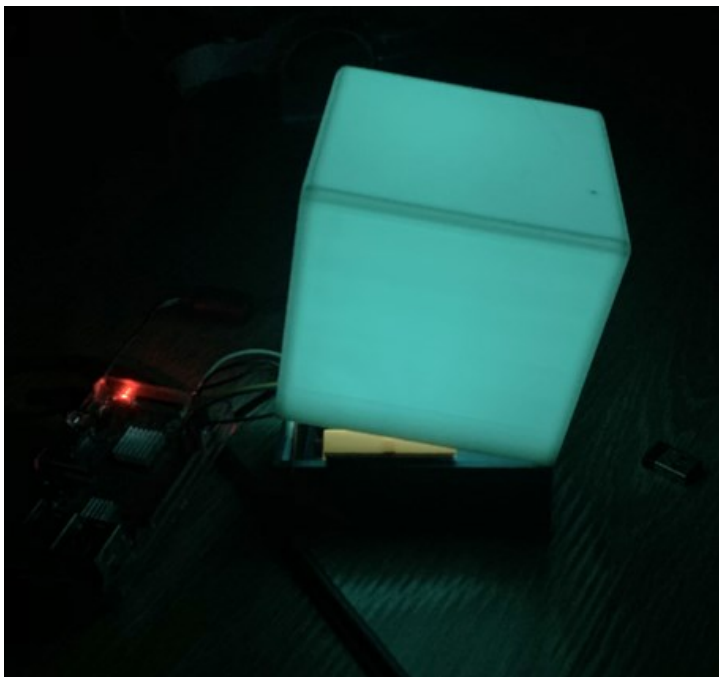


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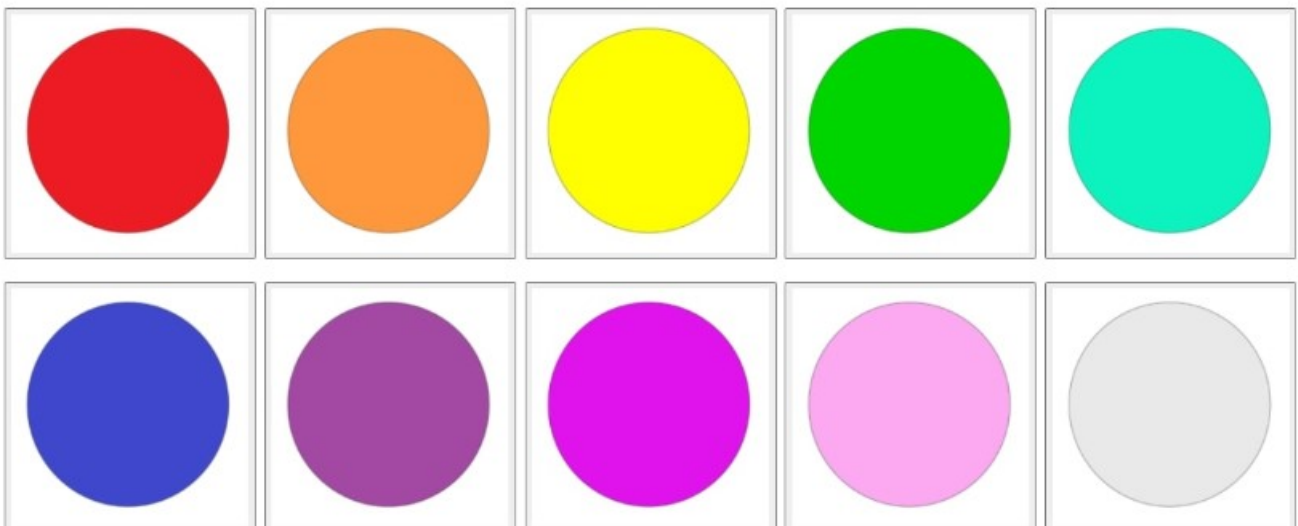
## Friendship Lamp

- Developed a program for a Raspberry Pi lamp to connect via Firebase to a buddy lamp and display matching colors in real-time
- Created a website in React to remotely control lamp colors
- Designed lamp case in SolidWorks and 3D printed to house LED strips



## Friendship Lamp

choose a color!





# Brielle Chenier

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## FIRST Robotics, Team 2412: Climb System

- Aluminum extrusion rails driven by chain to lift 150lb robot up a 45cm step
- 6 bearings held in each extrusion to ensure rails stay in correct position and do not bend
- Motor behind bottom bracket to control wheels and move robot forward during climb
- Sheet metal parts made with a waterjet and bent

