ECE 5 - Final Document

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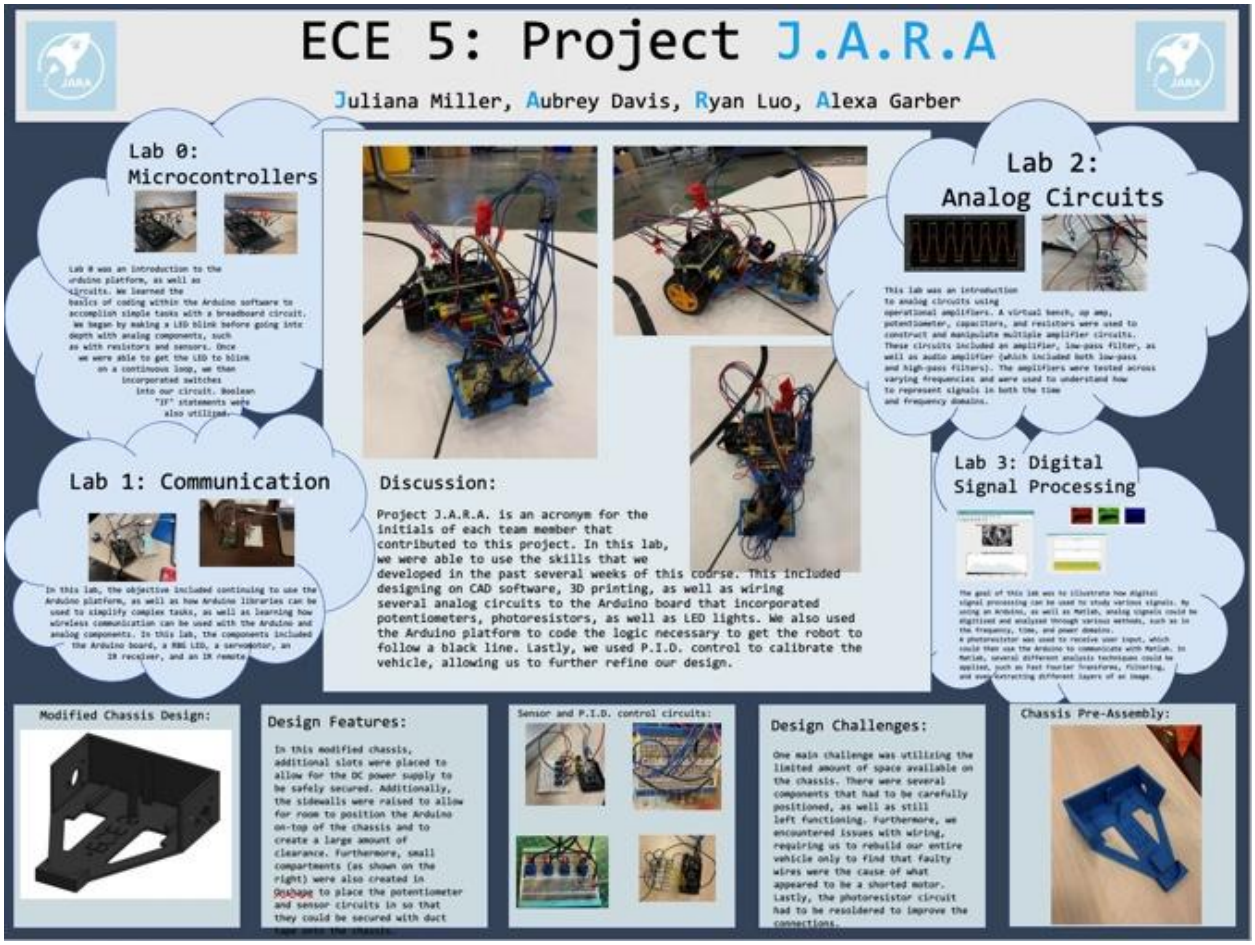
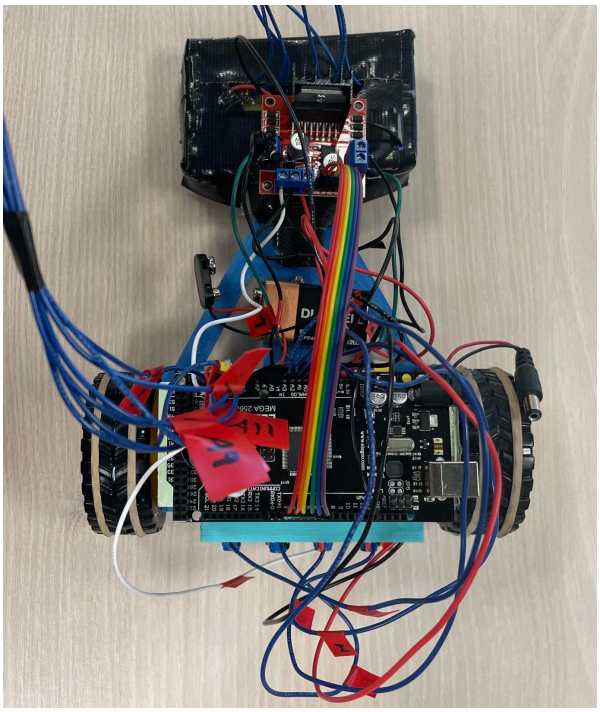
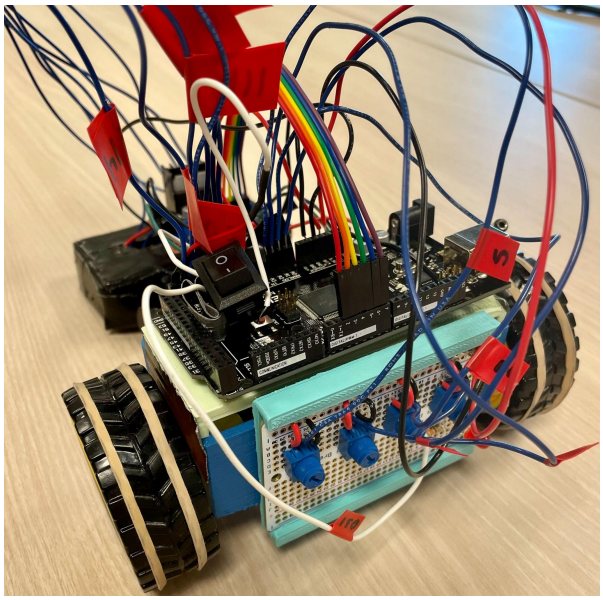
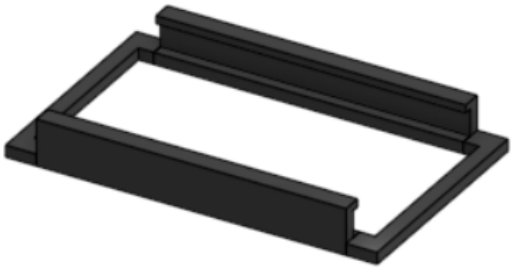
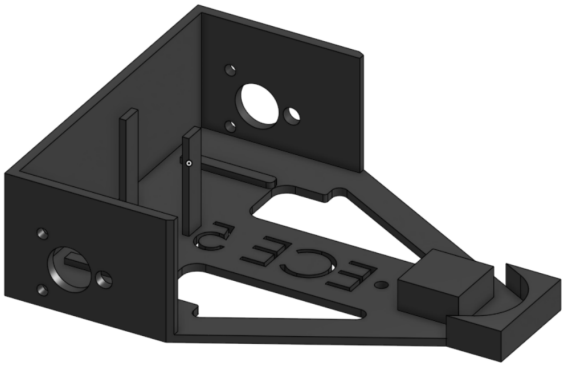


Flying Finn (robot):

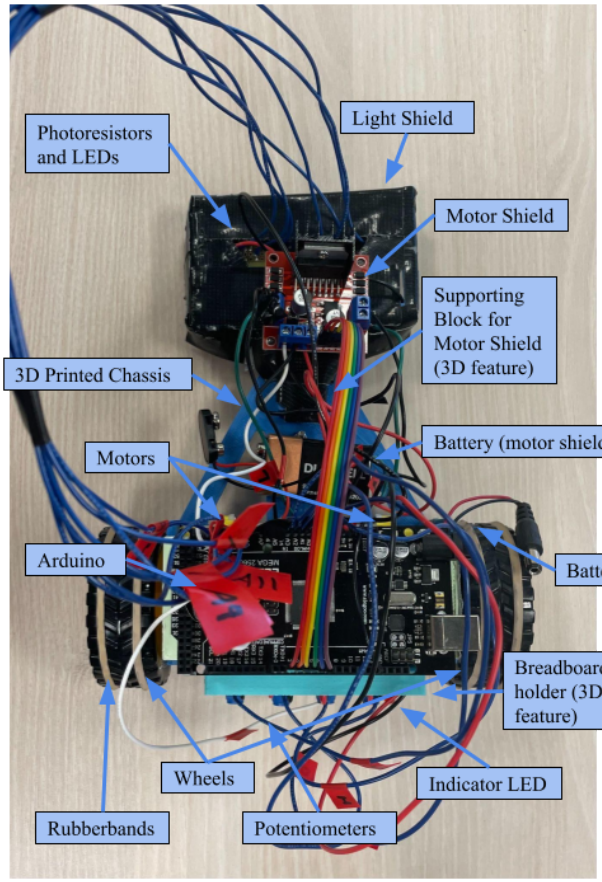








Final Flying Finn after revisions (robot):



[Link to Challenge 3 Video]

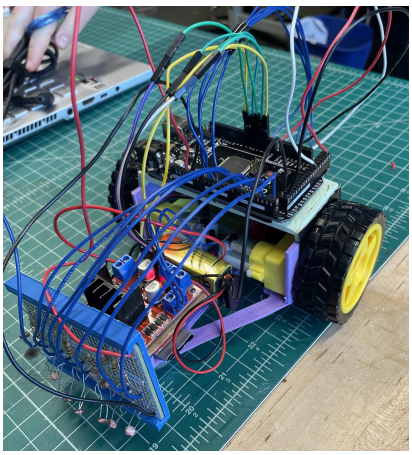
[Link to Frequency Line Video]

[Competition Video]

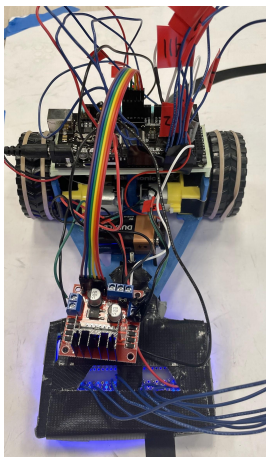
Competition Results:

Course	**Place**
Circuit	2nd overall
Frequency	3rd
Drag Race	2nd overall

Improvements:



Before



After

At the start of this project, we began by making several changes to the spacing on the chassis. Additionally, two new features included increasing the height of the walls of the chassis as well as adding a cover piece above the motors. In addition to this, we created 3D printed compartments to organize the electrical components that could be placed on the chassis. These additions allowed for an easier fit for the motors and created a second layer for the Arduino to be easily accessible. For the analog circuits, as aforementioned, we started off by creating 2 separate compartments that the circuit boards could slide into. One was positioned to the back of the vehicle to hold the potentiometers and one was connected to the front to angle the photoresistors correctly. We had initially placed the circuit board standing up with the photoresistors pointing down, but later improved it to make the board in a downward position with LEDs and a light shield incorporated.