

Hive Monitoring

Introductions

Dr. Richard Martin Dr. Richard Howard

Tate Sparks

Grade: Sophomore **Major**: Computer Engineering

Evan Kohut

Grade: Sophomore **Major**: Mechanical Engineering

Shrinidhi Kesavan

Grade: Sophomore **Major**: Computer Engineering and Computer Science

Sarah Benedicto

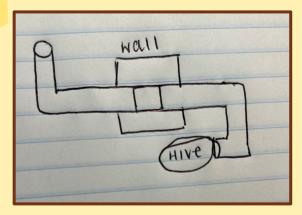
Grade: Sophomore **Major**: Computer Science and Cognitive Science

Background

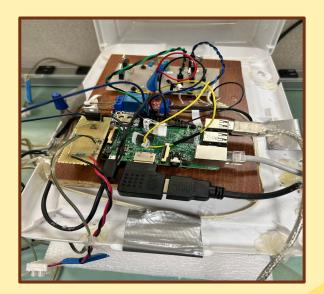
- The goal of this project is to detect the impact of electromagnetic radio frequency (RF) on bees.
- The purpose of this project is to see whether radio frequency emitted by humans is affecting bees, especially in terms of bee mortality.

• This project was **influenced** by the lead epidemic.

Setup



The following image represents the Raspberry PI setup, which we will use to induce the magnetic current in our experiment.



Analysis

- We will use machine learning to determine if AI can detect behavioral responses from the bees to the magnetic field.
- We will train artificial neural networks to classify videos using the PyTorch libraries.
- The results will produce the accuracy of the bees detecting the magnetic field.

Goals for Next Week

- Practice running machine learning scripts
- Getting familiarized with using Raspberry Pi
- Perform calculations for magnetic field