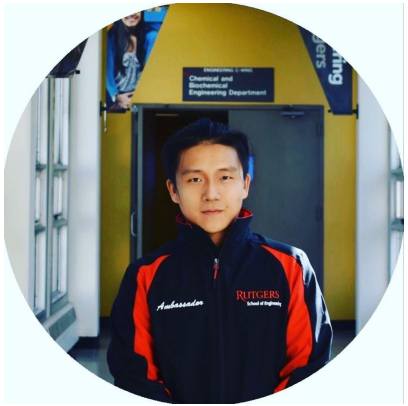
Investigating the Biological Impacts of Radio Spectrum Transmissions

The bee project group



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About the project

- Species (migrating birds, salmon, sea turtles) use Earth's magnetic field for navigation.
- Bees use Earth's magnetic field for navigation and orientation.

- Man-made sources of Radio-Frequency Electro-Magnetic Fields (RF-EMF) alter the Earth's field.

- This project proposes an experimental design to determine if honeybees can sense RF transmissions in frequencies from 1 MHz (AM radio) to 6 GHz (WiFi).

Project Goals

- Design a smart beehive package for collecting data related to the study.
- This includes:

  Magnetic Field sensor (magnetometer) for ground truth.

  A board to control the feeder pumps.

  If time permits: a load cell to measure the weight of beehive.

Tasks this Week

- Study the work done previously in this project.

- Literature review on related papers.

Goal Next Week

- Get the magnetometer to work.

  We will use a magnetometer sensor and attach it to PIP-Tag (wireless sensor node).

  Data will be converted from raw format to human-friendly values.

Questions?