

**Advisors: Dr. Ravi Hadimani and Neelam Prahbu**      **Client: Iowa State University**  
**Members (roles): Marion Okoth (Team Leader), Elizabeth Clarkin (Website) and Matthew Mulloy (Communication)**  
**Project Title: Magnetic Sensor Design.**

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## Weekly Summary

The main goal this week was to finalize our understandings of our specific tasks and start brainstorming solutions.

## Meeting notes:

### 2/2 Group Meeting

**Duration:** *Canceled due to weather*      **Members Present:** *None*

### 2/6 Group Meeting with Advisors

**Duration:** *60 min*      **Members Present:** *All*

## Purpose and Goals:

Update project deliverables, brainstorm solutions to GUI (Graphical User Interface) and magnetic field, answer logistical questions, and make sure everyone is on the same page.

## Achievements:

- Elizabeth and Marion trained in COMSOL
- Continued work on GUI
- Website started
- Magnetic field generator design limited to two options, solenoid or geometric with permanent magnets

## Pending issues

1. Training for magnetic field simulation tools
2. Implementations of MATLAB for different input files from software.
3. Type of materials to be considered in the antenna design.
4. Appropriate magnetic shielding
5. Finalize Project plan
6. Decide upon goals for each semester

## Plans for next week

1. Matt: Will continue design on the magnetic field generation unit, learn simulation tools, and assist with GUI as required.
2. Elizabeth: Will continue working on the website, continue the MATLAB GUI for the software interface with the machine
3. Marion: Will continue researching more ferrite epoxy materials that can be used for the antenna, Hysteresis graph.

## Individual Contributions (this week)

Matthew Mulloy: Attended the meeting, coil design, possible geometric designs, and weekly report. (5 hrs.)

Elizabeth Clarkin: Attended the meetings, website design, learned COMSOL, GUI design (6 hrs.)

Marion Okoth: Attended meetings, research, learned COMSOL (10 hrs.).

## Total contributions for the project

Matthew Mulloy (16 hrs.)

Elizabeth Clarkin (18.5 hrs.)

Marion Okoth (23 hrs.)