# Bullseye

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## Background

There are numerous benefits when implementing robot technology in military targeting exercises; varying from safety and efficiency to higher performance from all participants. Expediting training for military personnel while challenging them with mobile targets yields greater national security for a lower cost in the protection of the United States.

## Milestones and Challenges

- ✓ **Design robot and outline coding specifications**
- ✓ **Complete Initial construction and simple navigational programing**
- ✓ **Create a working draft of GUI (Graphical User Interface)**
- ✓ **Integration of GPS positioning/ and tuning**
- ▪ **Complete refactorization**
- ▪ **Finish Implementation of turntable**
- ▪ **Complete added features**

### Challenges

We had to refactor and redo a fair amount of code as we were unable to properly expand the list of features for the robot

## Project Goal

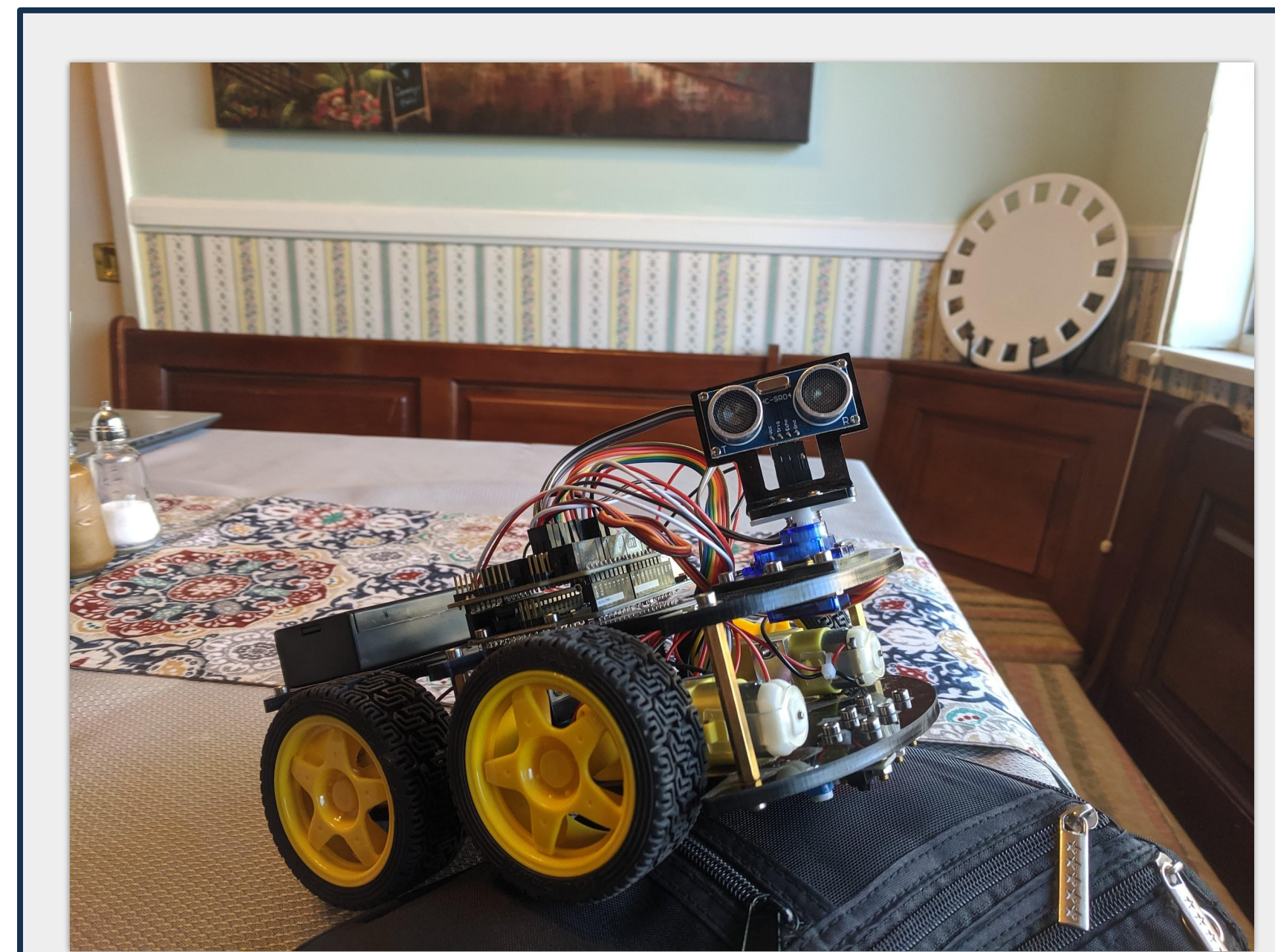**To create a long-range autonomous robot for dynamic target exercises in the Navy.**
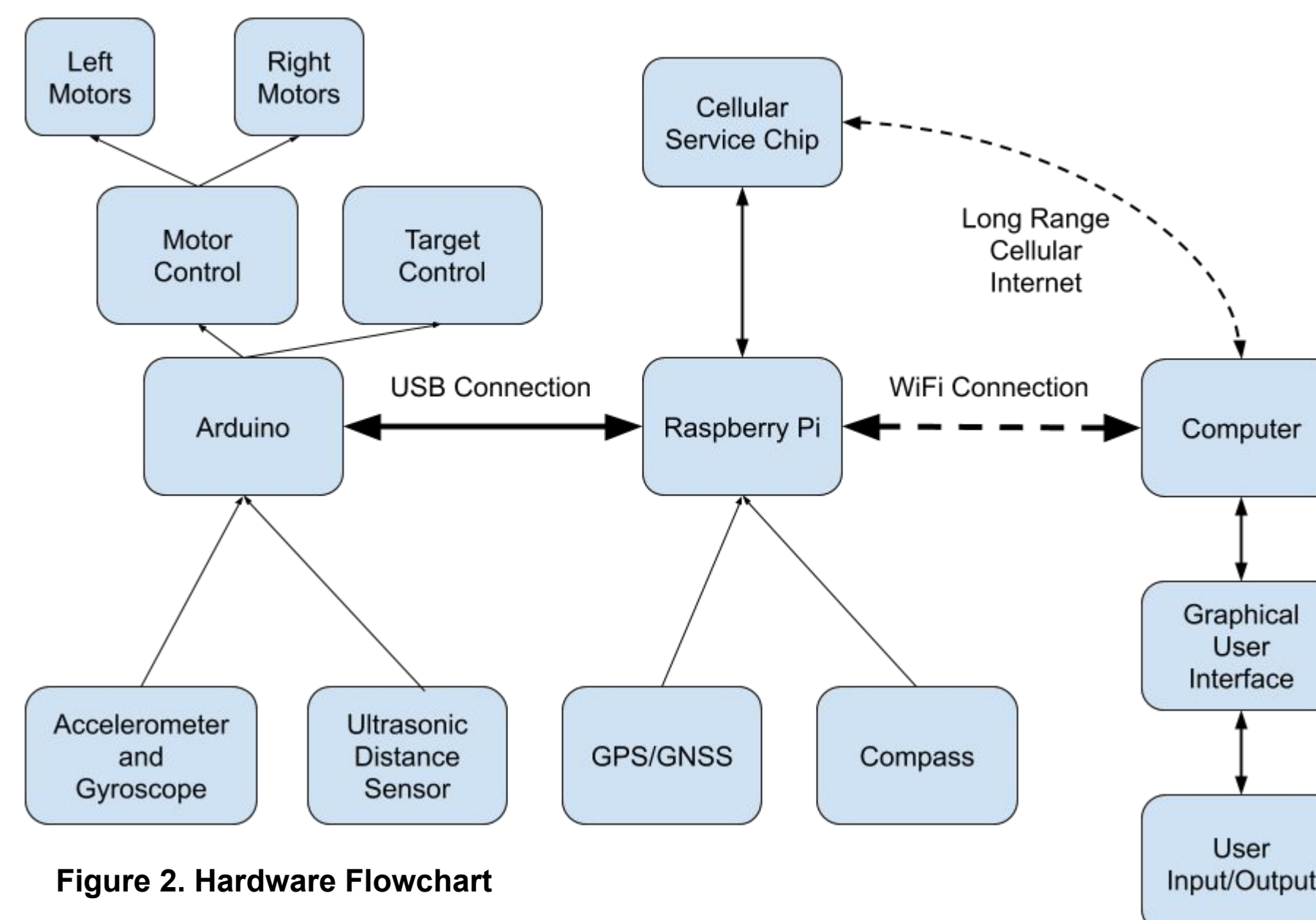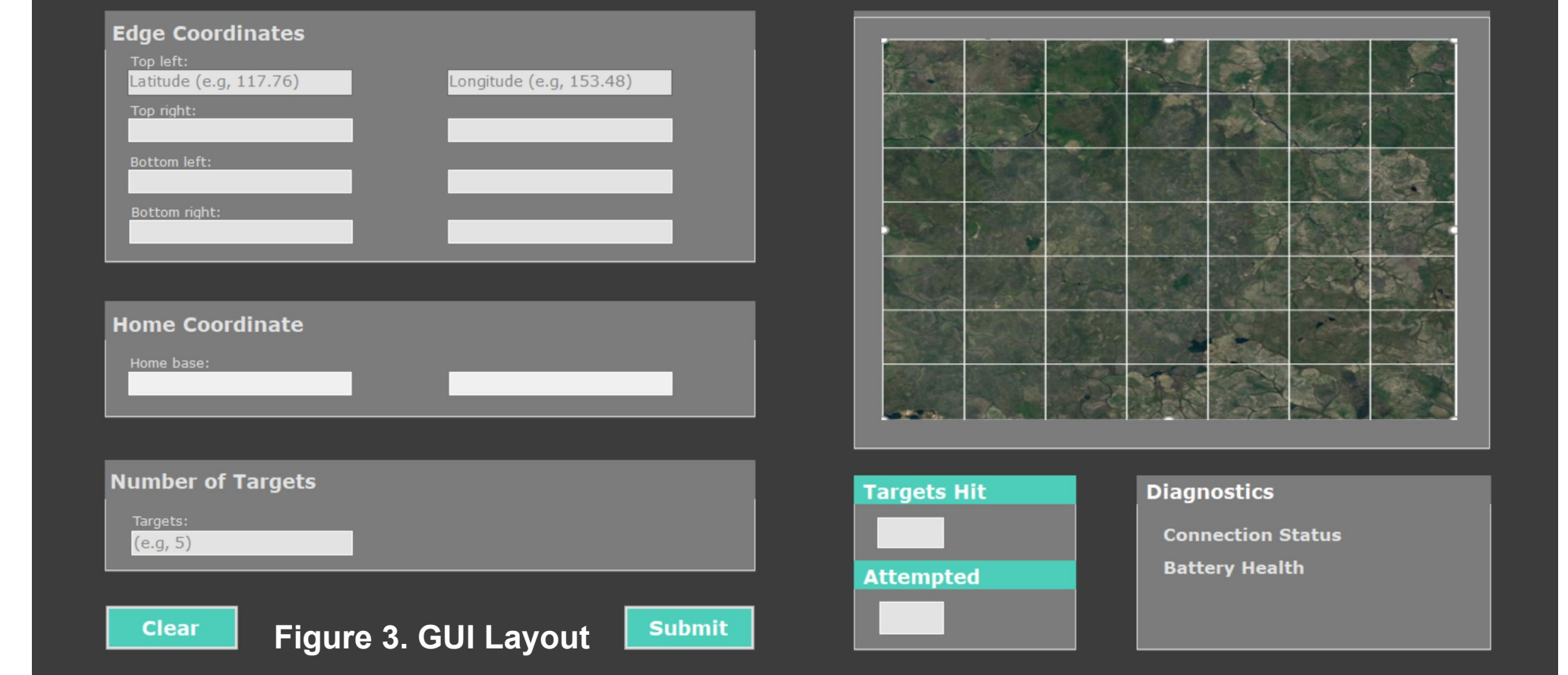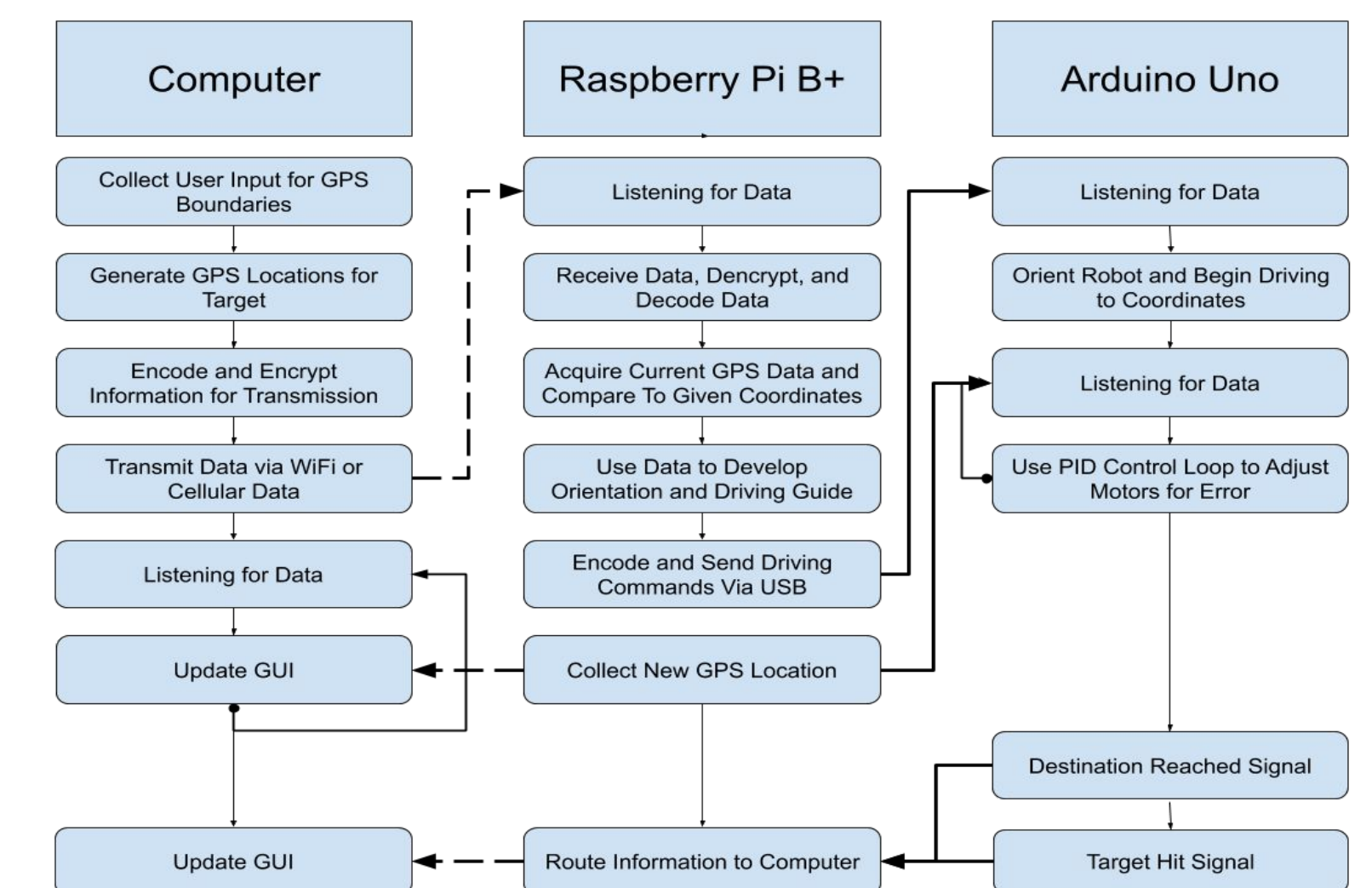

**Figure 1. Robot**


**Figure 2. Hardware Flowchart**


**Figure 3. GUI Layout**

### DATA FLOW DIAGRAM



## Sources

[1]S. Bullock, B. Jones, J. Gilchrist and S. Marshall, "Prevention of Physical Training–Related Injuries", *ScienceDirect*, 2019. [Online]. Available: https://www.sciencedirect.com/science/article/abs/pii/S074937970900676X.

[2]H. Seck, "Thousands of Marines Participating in Robotic Target Study", *Military.com*, 2019. [Online]. Available: https://www.military.com/defensetech/2018/09/26/thousands-marines-participating-robotic-target-study.html.