"Closing the GAPS between YOU and the FUTURE"

G.A.P.S. Garage Assisted Parking System

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Background

- **Why?**
  - People are looking to find new ways to modernize their homes and assist themselves in simple tasks such as parking their vehicles in the garage
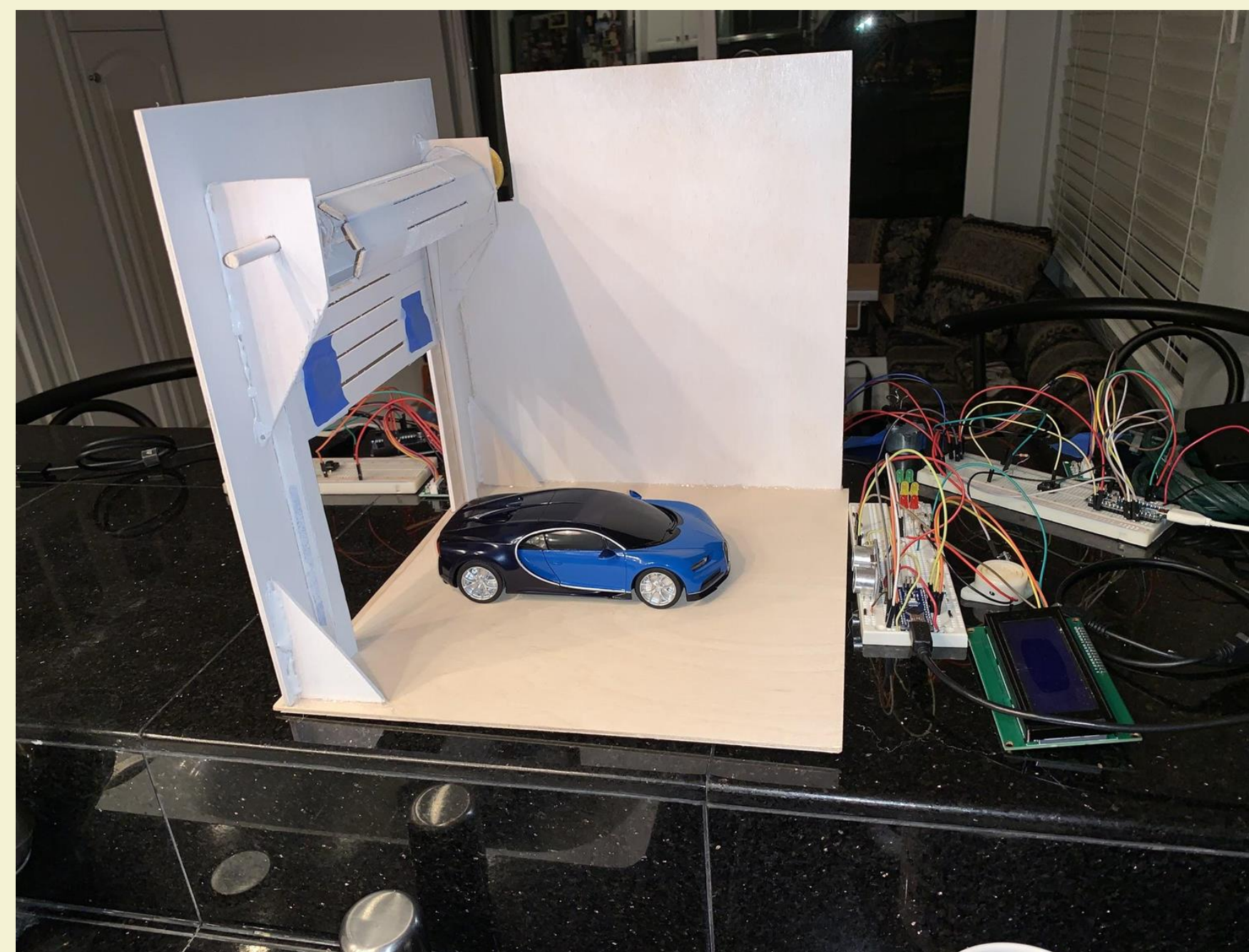
Overview

- **Problem**
  - Damage caused by vehicle bumpers by accidentally hitting objects/walls
  - Carbon-monoxide poisoning
- **Solution**
  - Assisted parking system
  - Active vehicle motor (sound) detection

System Block Diagram or Design Specs
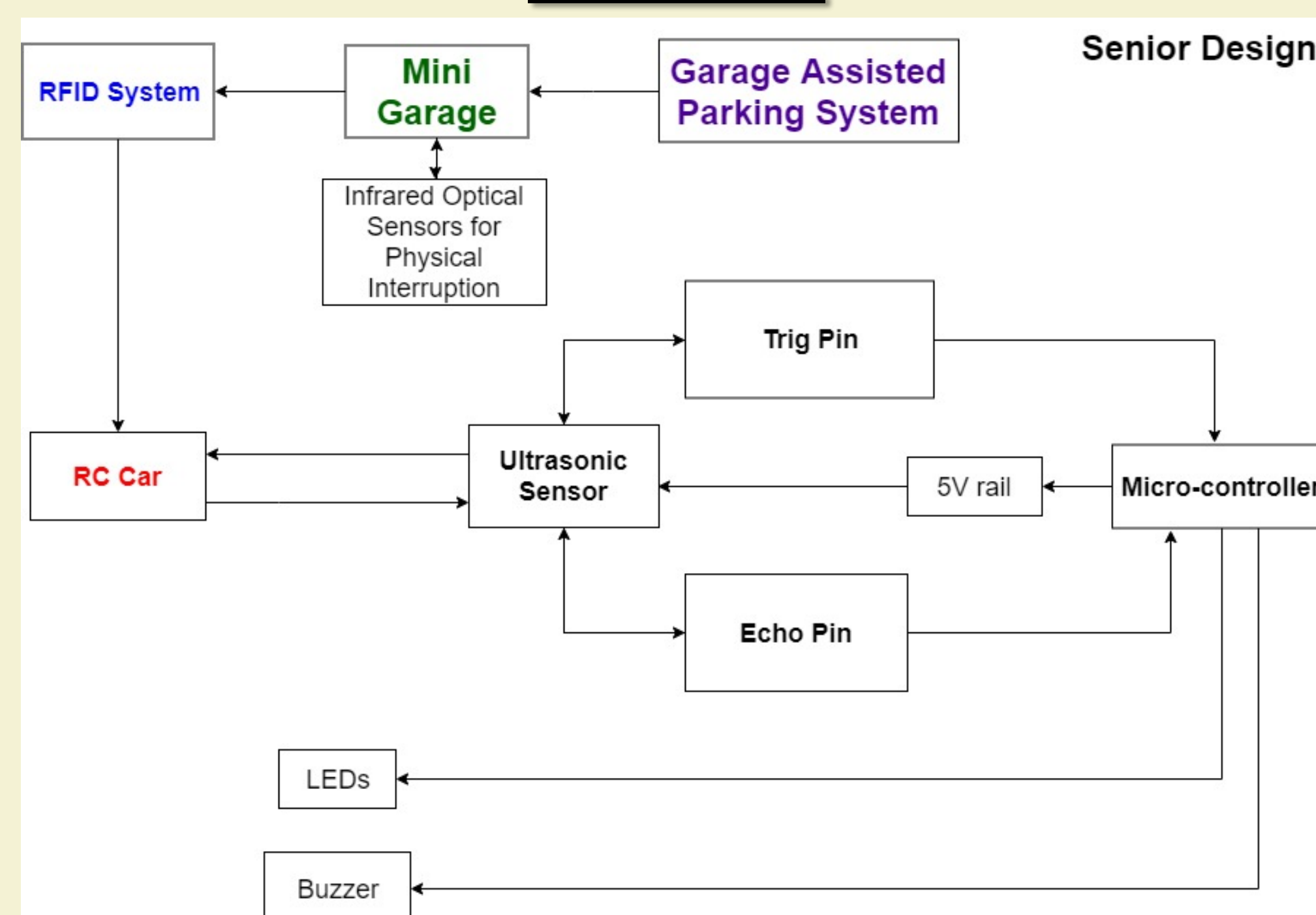
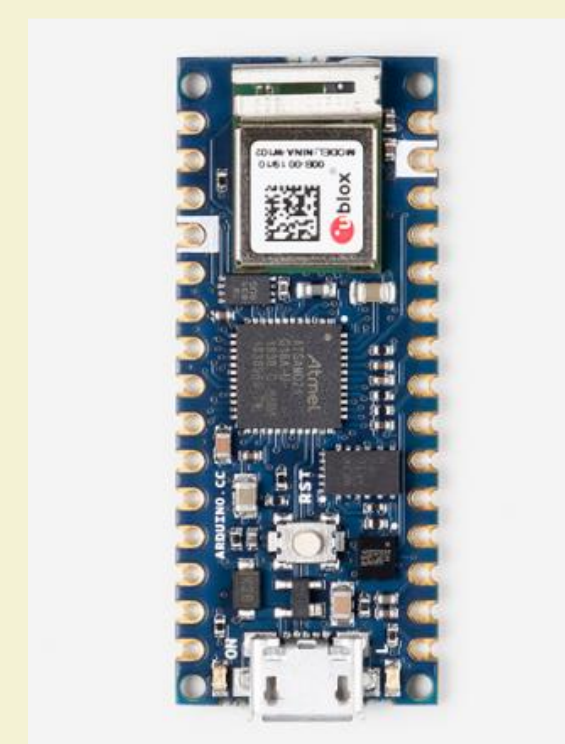## Overview / G.A.P.S.

- **System**
  - Garage Model: Ultrasonic Sensor, Mechanical Door, Sound Detection, WiFi, RFID
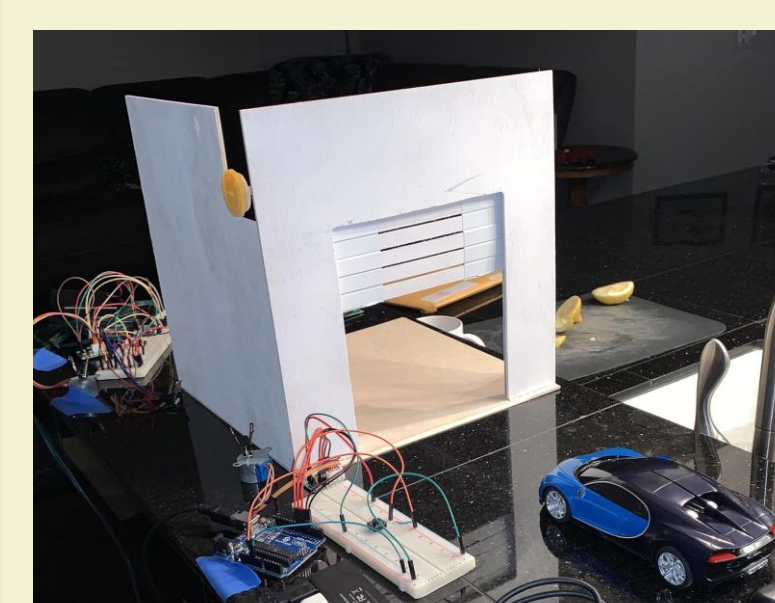 - RC Car: Receiver and Transmitter

Hardware / Key Components

Ultrasonic Sensor
Measures the distance to the target by measuring the times between the emission and reception.
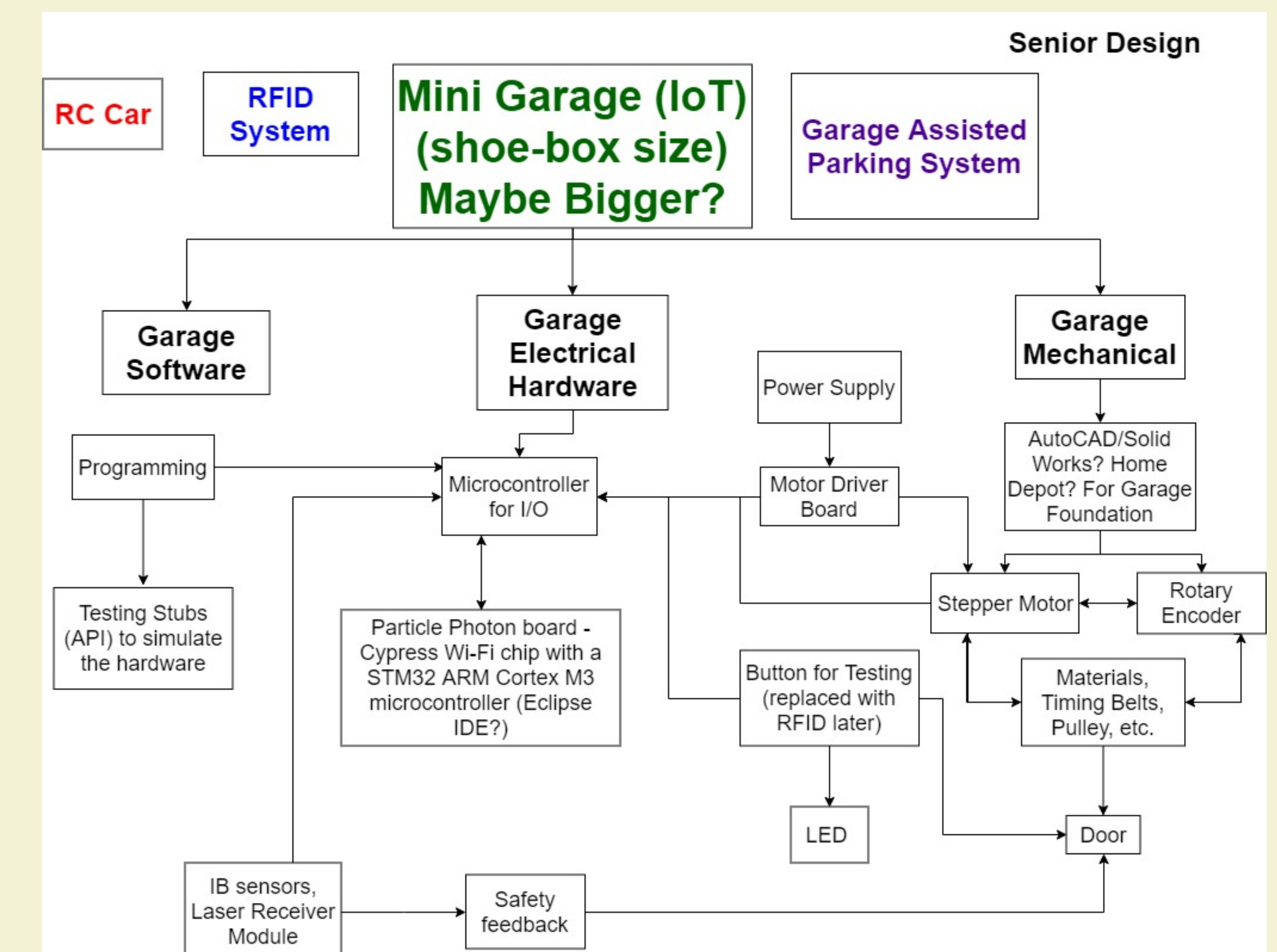
Nano 33 IoT
Low Power Arm Cortex-MO 32-bit SAMD21, with WiFi and Bluetooth connectivity operating in 2.4GHz range. Operating voltage at 3.3V with 11 PWM Pins.
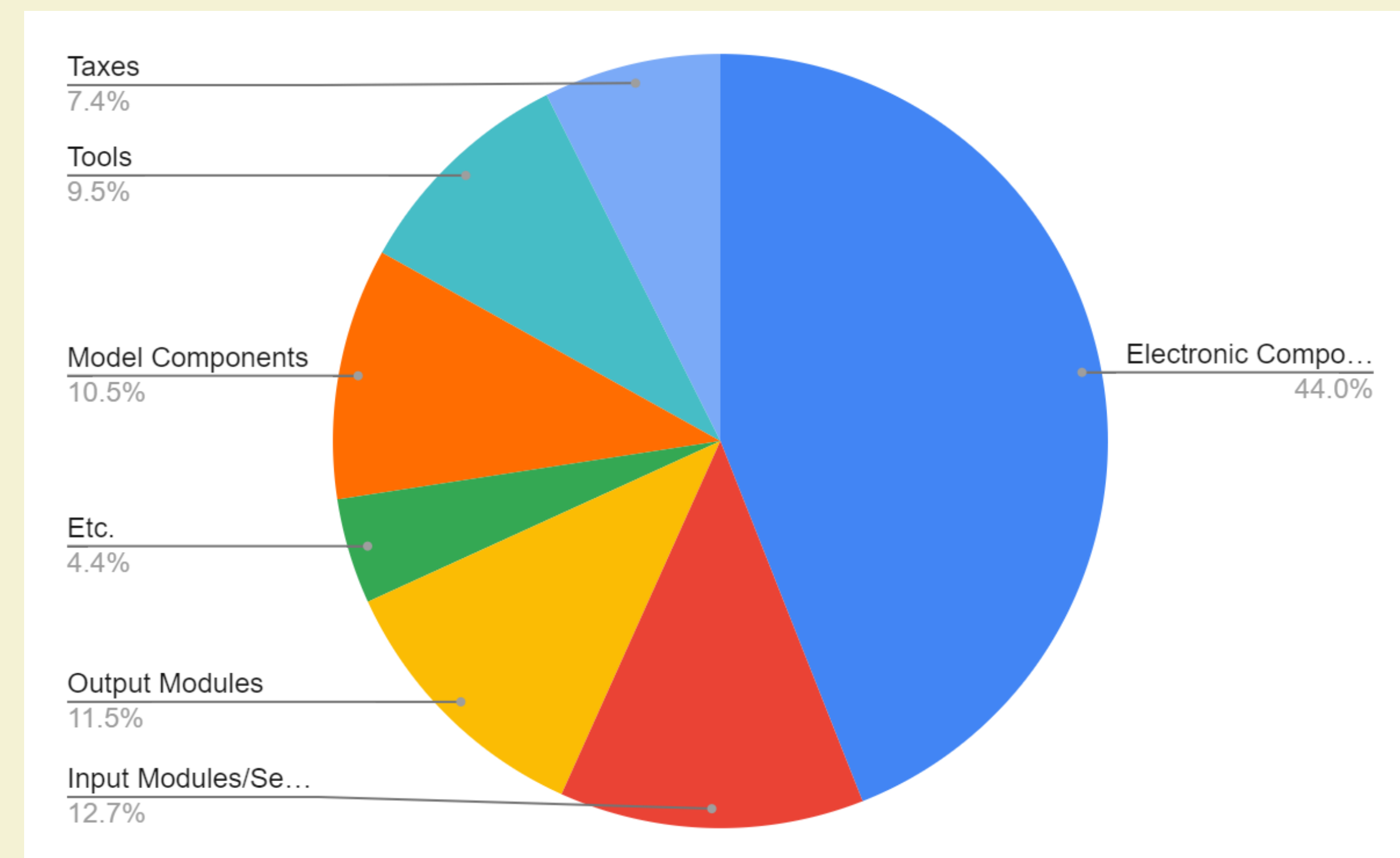
Garage Model
- Unipolar 5V stepper motor: 513 steps per revolution
- RC522 RFID Module 13.56MHz
- Micro-controller

Garage Block Diagram

Budget

Total Spent: $359.37

Website: http://bit.ly/Team_49_Senior_Design

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