

Arduino MKR 1310 Board

- Overview

- LORA connectivity w/ low power
- Can connect to
 - + Arduino IoT Cloud
 - + LORA network using Arduino LORA PRO Gateway
 - + other boards

- Main Features

- Cortex-M0 32-bit SAMD21
 - + low power processor
- Murata CMWX122ABZ
 - + LORA wireless to connect to own network
 - + Connect to various LoRaWAN networks
- ATECC508 crypto chip
 - + keeps data secure and private

- Tech Specs

- Operating Voltage: 3.3V
 - Note: VFN runs off of 5V (A little weird)
- Communication
 - + UART
 - + I2C
 - + SPI

MKR 1310 RoboticsJuly 12,
2022

- Goal

- To make a self navigating, obstacle avoiding, GPS-navigated robot to collect samples in the future.

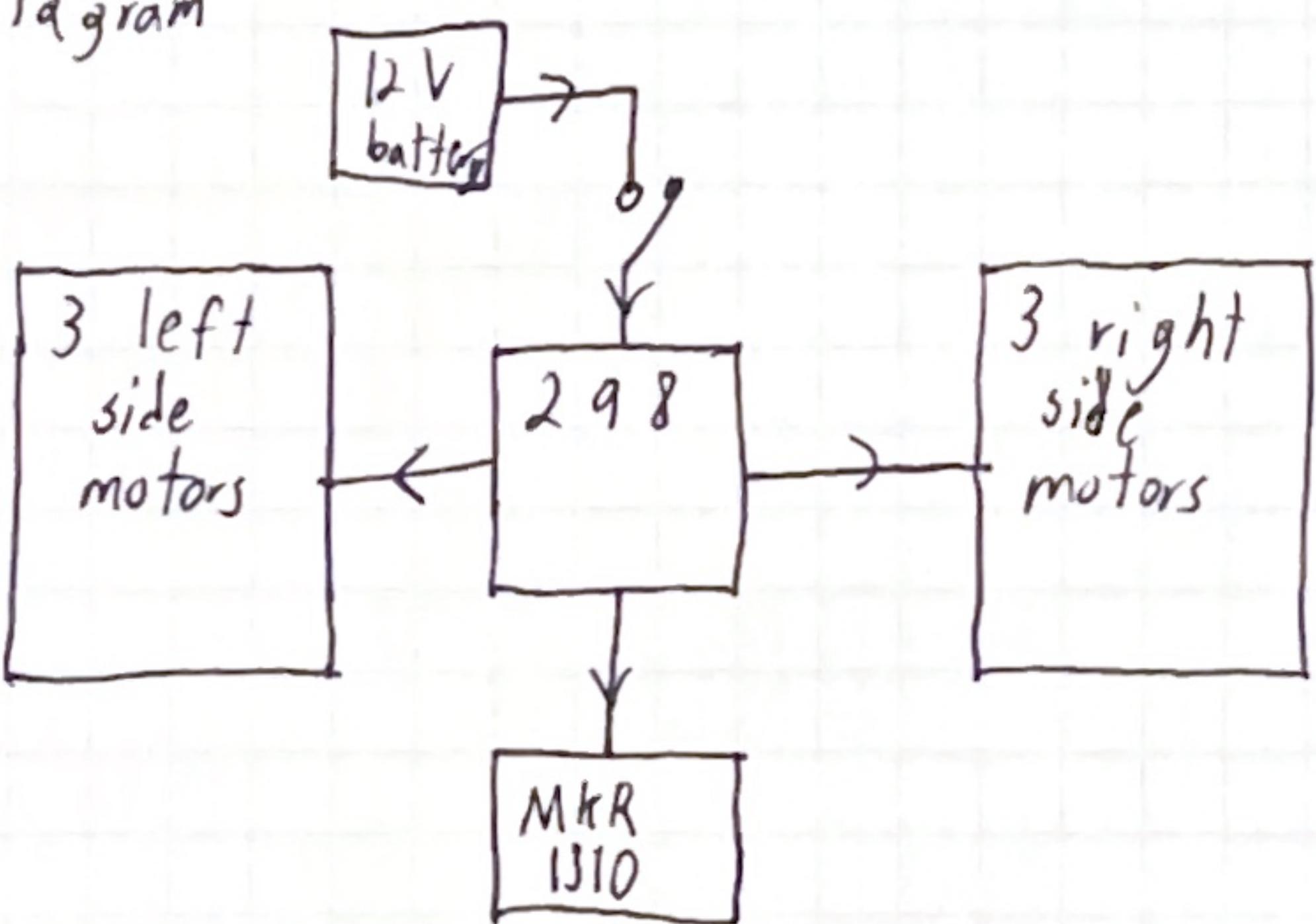
- Components

Project 1 - Movement

- Components

- MKR 1310 board
- LM298 motor controller
- PiBorg structure
- 12V battery
- 6 motors

- Diagram



- Physical Connections

- 2 wires from battery to LM298
 - + red for Voltage
 - + black for Ground
- 4 wires from LM298 to Motors (2 for each side)
 - + red and black again

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- Physical Connections

- LM298 to MKR13/0 6 wires

+ 2 Enable pins

↳ must be PWM, we use analogWrite command

+ 2 for right side motors

↳ digital pins, we use digitalWrite

+ 2 for left side motors

↳ digital pins

- Code