

Hand Gesture Controlled RC Car

Project progress report 1
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George mason university

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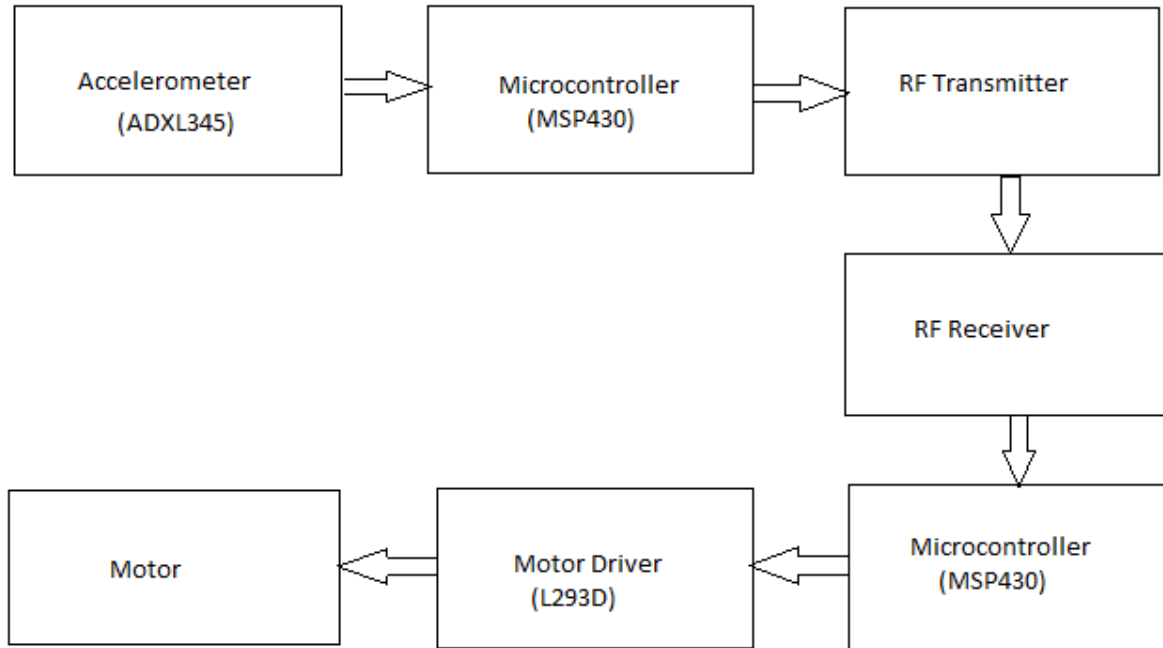
Overview

We are creating user friendly robotic device that can be helpful for the people to move heavy load.

The robotic device can be controlled by hand gestures.



Block diagram





Component type: MSP430 [FR6989]

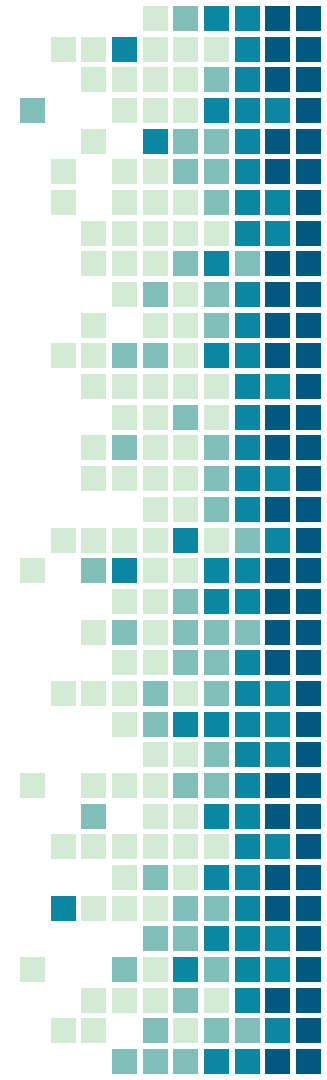
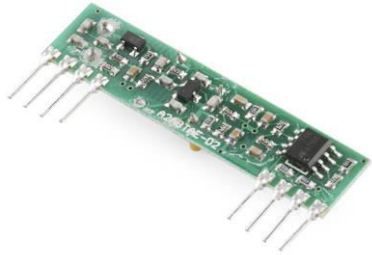
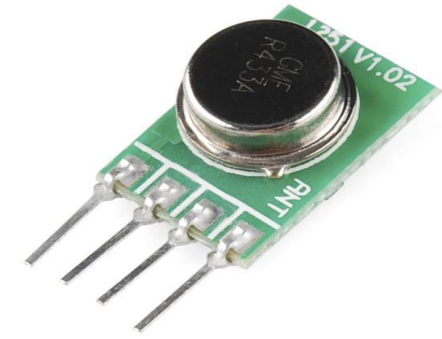
- Ultra low power microcontroller from Texas instruments.
- 16 bit RISC architecture with 16 MHz clock
- 128 kb of nonvolatile memory
- 2 I2C , 4 SPI
- ADC 12- 16ch
- 5 16-bit timers
- 2 UART

Status: Ordered

RF Transceiver

- 434 MHz
- 500ft range
- 4800bps data rate
- 5V supply voltage

Status: Delivered

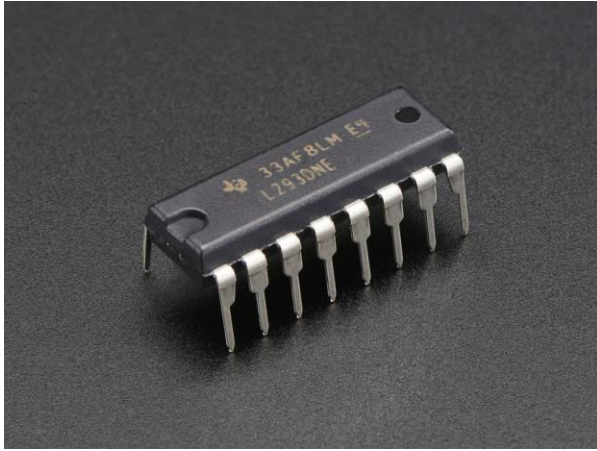




Digital accelerometer [ADXL345]

- Triple-axis accelerometer with digital I2c and SPI interface.
- It has on board 3.3v regulator and logic-level shifting circuitry, making interfacing easy with 3v or 5v controller.

Status: Delivered

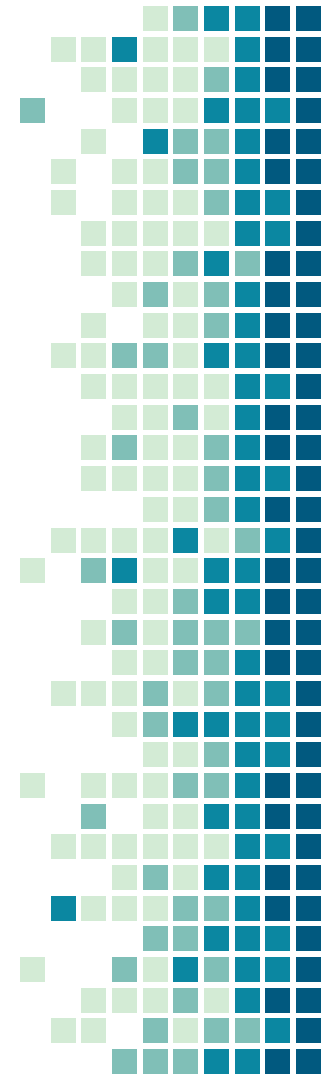


Dual H-Bridge Motor Driver

[L293D] And DC motor

- Voltage Range: 4.5 V to 36 V
- It has PWM input per driver so you can control motor speed
- Dc motor has voltage range of 4.5 to 9 VDC

Status: Ordered

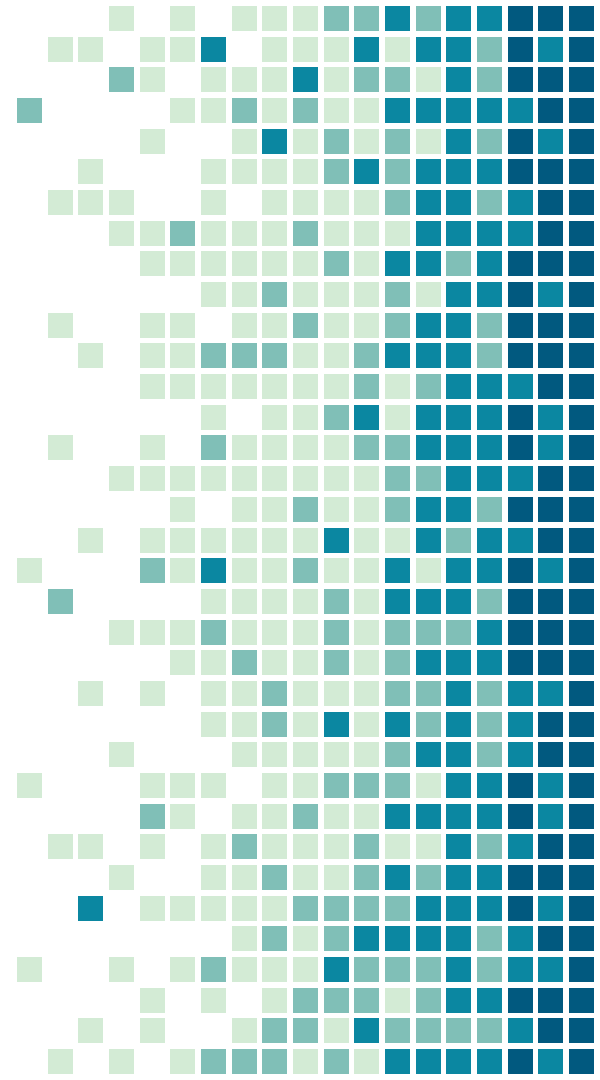


Overall progress

- All required components has been ordered.
- Initial planning and research has been done.

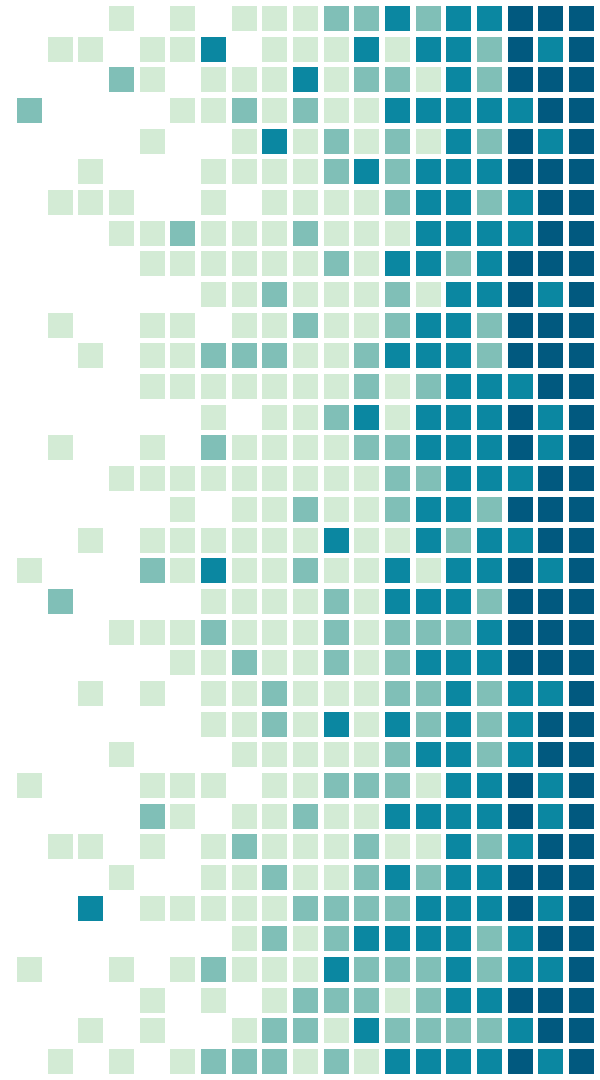
Future plans for next report

- Interfacing hardware components.
- Finishing testing and debugging.



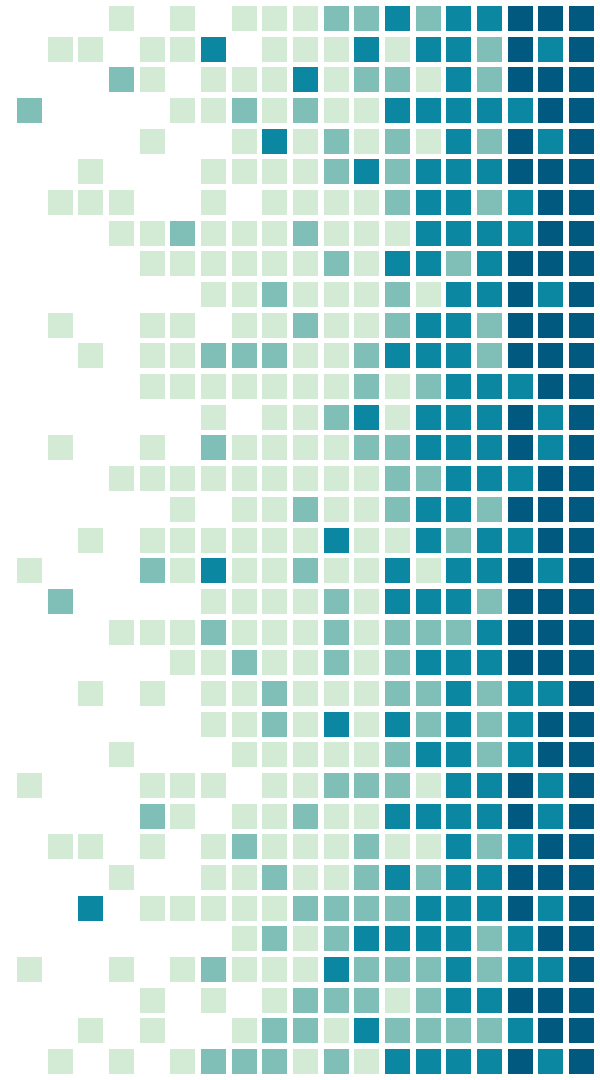
Task division

- Sairaj: Microcontroller programming
- Ajinkya: Motor driver circuit interfacing
- Surya: Wireless Transceiver interfacing
- Pratheek : Component testing and interfacing



Plan B

If we face any problem with the PWM in case of motors we will go for a simple ON and OFF motor.



THANK YOU!!

Any Queries?

