# Github:

\* https://github.com/AnthonyYos/IoT

\* https://github.com/aaackc/IOT

\* https://github.com/s0720bae/IoT

\* https://github.com/md56n/iot

\* https://github.com/M1K43L4/IoT-Robotics

# Video:

https://www.youtube.com/watch?v=aCr7s3Q86yA&feature=youtu.be

# Introduction:

The purpose of ICP 12 was to create a robot car that would be able move using user input, as well as automatically move when it detects an object nearby in front via sonar sensor.

# Workflow/ Methods:

\* Divided tasks between members

- Build chassis for car and test wheels if they works properly.

- Build the app using app inventor.

- Create functions for car movement and sonar distance.

\* Implemented bluetooth functionality and tested user input for each direction.

\* Tested for automatic car movement if obstacle in front is close by.

# Circuit Diagram:

![](https://github.com/AnthonyYos/IoT/blob/master/ICP%2012/Documentation/Car%20circuit.jpg)

# Parameters:

\* Function that changes wheel speed based on user input.

![](https://github.com/AnthonyYos/IoT/blob/master/ICP%2012/Documentation/forward%20and%20stop%20functions.png)

\* Function that finds the distance of objects in front of sonar.

![](https://github.com/AnthonyYos/IoT/blob/master/ICP%2012/Documentation/backward%20and%20turn%20functions.png)

\* User input for movement

![](https://github.com/AnthonyYos/IoT/blob/master/ICP%2012/Documentation/Bluetooth%20actions.png)

![](https://github.com/AnthonyYos/IoT/blob/master/ICP%2012/Documentation/App.jpg)

![](https://github.com/AnthonyYos/IoT/blob/master/ICP%2012/Documentation/App%20inventor%20blocks.png)

# Evaluation & Discussion:

ICP was rather straight forward. Some things that helped with the car was having another group's built already for reference when building ours, as well as following a tutorial on getting the motor connections wired properly and how basic movement works. Other tutorials helped with getting the sonar connected, and referencing previous ICPs helped with the bluetooth and app inventor.

# Conclusion:

Created make a basic arudino-based user-controlled car, that can automatically move back if it detects a nearby object in front of it.