# Assignment 8 – Bluetooth Car

[*Submit on Blackboard*](https://blackboard.usc.edu/)

## Goals

* Connect car chassis and motors
* Control car via Bluetooth

Overview

This assignment is to build a small car and then control it via Bluetooth with a smartphone. In class we will then race all the vehicles.

Components

* Argon
* Breadboard
* Car chassis
* 2 x DC hobby motors
* LiPo battery
* Decorative elements to distinguish your car

Requirements

* No Fritzing diagram is needed. Wiring diagram and plans are provided in the lecture notes.
* Build the car.
* Create the sketch to drive the car and enable communication with Bluefruit app. We will create the basics of driving functions and Bluetooth communication in class. It will be up to you to make any changes or optimizations
* Add some element(s) that distinguish your car. These can be blinking lights or something more elaborate.
* Plan to bring car (with fully charged battery) and phone to class

Competitions

### **Best designed car**

* Students will vote anonymously for the best designed car. A prize will be awarded to the winner

### **Driving tournament winner**

* There will be multiple heats and a final race to determine a winner. A prize will be awarded to the winner.

Required naming convention (replace # with the current assignment number)

* **Project Name** 
  + itp348\_a#\_lastname\_firstname
* **Zip File** (include entire project folder)
  + itp348\_a#\_lastname\_firstname.zip

## Deliverables

1. A compressed file containing your project. Follow the guidelines for full credit.

Here are the instructions for submission

1. Navigate to your project folder.
2. Include the *entire* folderin a zip file
3. Rename the zip file based on naming convention
4. Upload zip file to Blackboard site for our course
5. A photograph of your device connected to USB with the blue light on.
6. A (very) short video demonstrating your project functioning

## Grading

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| --- | --- |
| Item | Points |
| Car structure | 5 |
| Driving and Bluetooth sketch | 5 |
| Car customization | 5 |
| Participating in competition | 5 |
| Total | 20 |