

ECGR4161 – Introduction to Robotics  
Lab Assignment #1  
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Objective:

There are two part in this lab. The first part focused on the assembly on the robot. Second part, student was asked to verification the condition of hardware by using TI cloud web tool to check the peripheral of the robot. Assembly of robot was very straightforward by following the instruction that is proved in the document. Verification of hardware required to install TI Connect Cloud on to the PC for the micro-controller unit.

URL of the video:

<https://youtu.be/i2ugfAank5s>

Commentary:

There is minor issues with the installing of the TI Connect Cloud with using Linux machine. Because of newer Linux mint version removed the repository which link to “libudev.so.0”, there was a error code regarding to “libudev.so.0”. According to the [askubuntu.com](http://askubuntu.com), I was successfully linked the “libudev.so.0” to “ libudev.so.1” and continued the installation of TI Connect Cloud.

Lab Questions:

1. While the robot is up in the air, what value does a motor need to be set to in order for it to start turning? (see the Canvas page for an example of the movement)  
Motor need at least about 45 to 50 PWM value to make the wheel start turning.
2. While the robot is on a table, what value does a motor need to be set to in order for it to start turning? (see the Canvas page for an example of the movement)  
Motor need additionally 5 more PWM value or 50 to 55 PWM value to making wheel start turning.