



THE UNIVERSITY
of EDINBURGH

Robotics: Science and Systems

Practicals - Final Report

Henrique Manuel Martins Ferrolho
s1683857 - henrique.ferrolho@gmail.com

November 20, 2016

Contents

1 Abstract	3
1.1	3
2 Introduction	4
2.1	4
2.2	4
3 Methods	5
3.1	5
3.2	5
4 Results	6
4.1	6
4.2	6
5 Discussion	7
5.1	7
5.2	7
6 Sources	8
A Appendix	9
A.1 Manual do utilizador	9

1 Abstract

1.1

2 Introduction

2.1

2.2

3 Methods

3.1

3.2

4 Results

4.1

4.2

5 Discussion

5.1

5.2

6 Sources

Python 2.7 Docs

<https://docs.python.org/2.7/>

OpenCV 3.0.0 Docs

<http://docs.opencv.org/3.0.0/index.html>

The Art of LEGO Design

<http://www.cs.tufts.edu/comp/150IR/artoflego.pdf>

LEGO Design

<https://www.clear.rice.edu/elec201/Book/legos.html>

Gears, Pulleys, Wheels, and Tires

<http://www.ecst.csuchico.edu/~juliano/csci224/Slides/03%20-%20Gears%20Pulleys%20Wheels%20Tires.pdf>

LEGO Gear Ratio Calculator

<http://gears.sariel.pl/>

A Appendix

A.1 Manual do utilizador

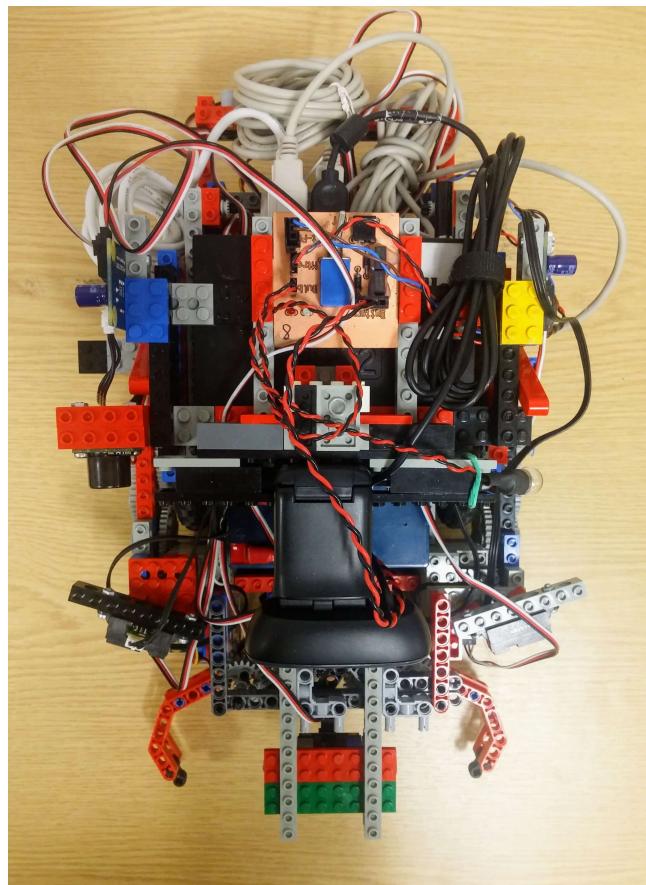


Figure 1:

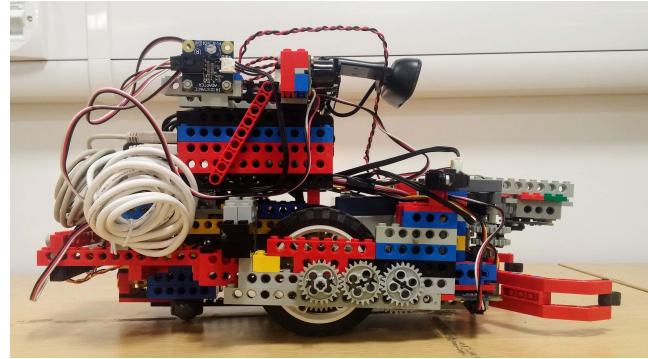


Figure 2:

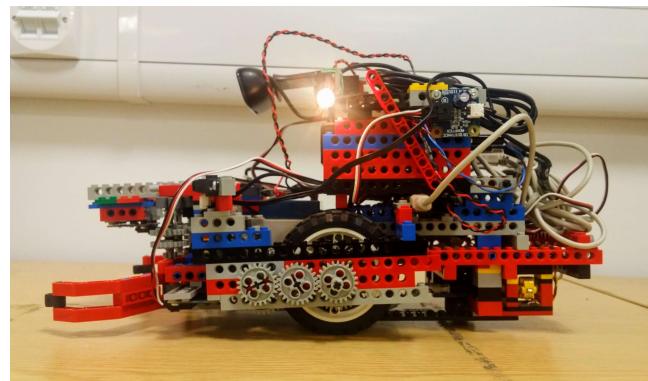


Figure 3:

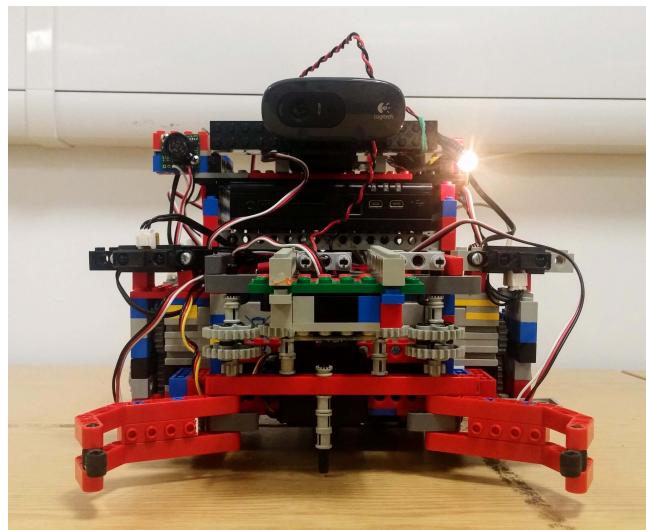


Figure 4:

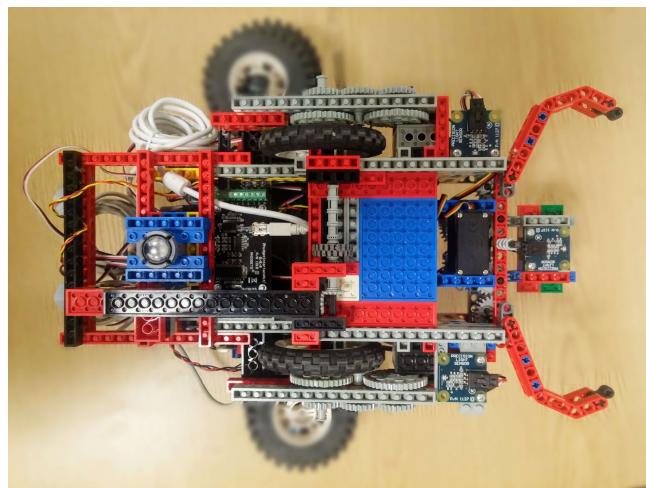


Figure 5:

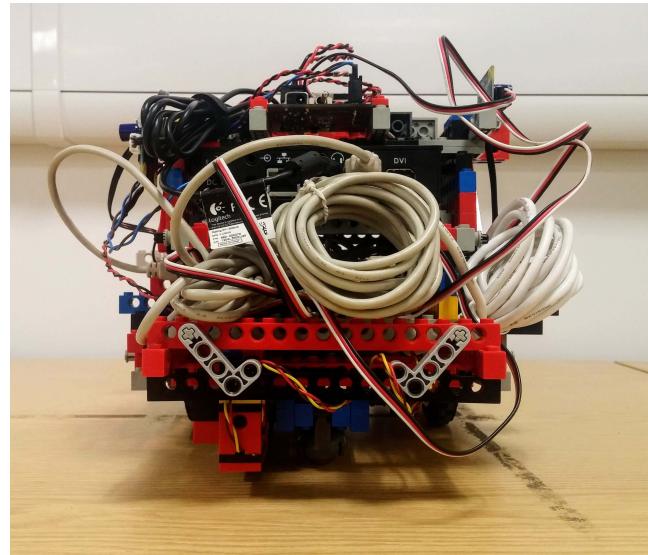


Figure 6:

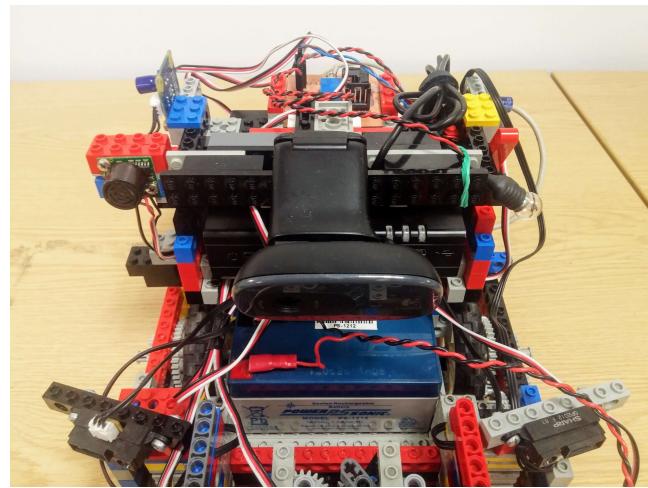


Figure 7:

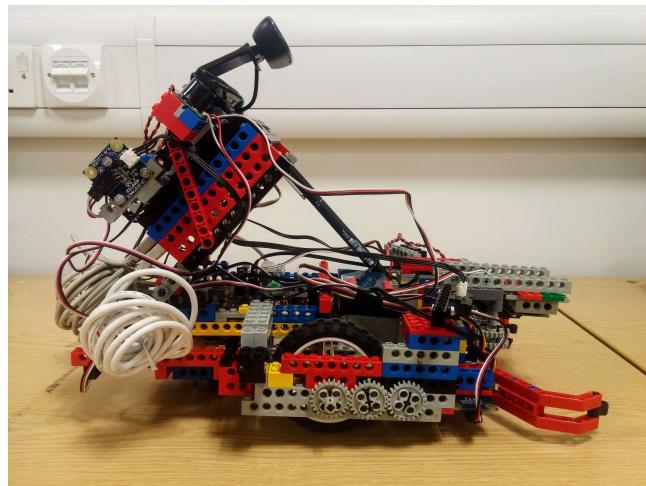


Figure 8:

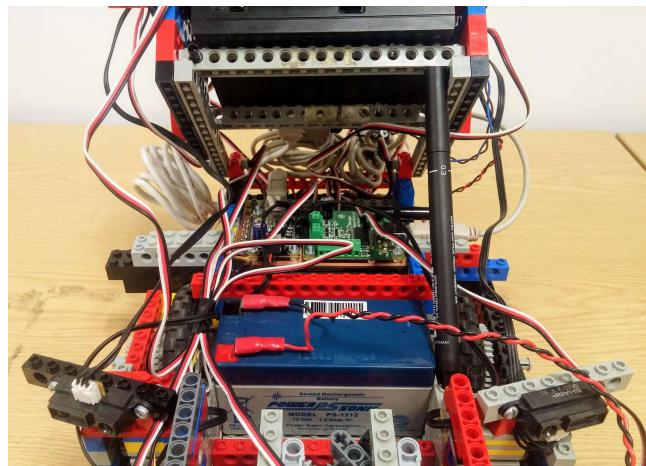


Figure 9:

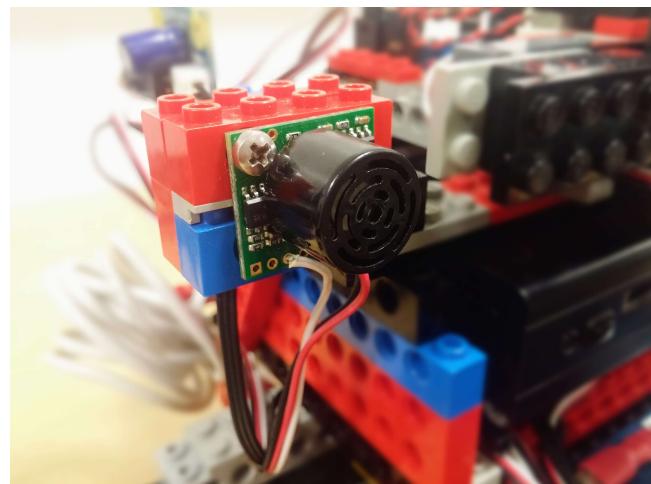


Figure 10:

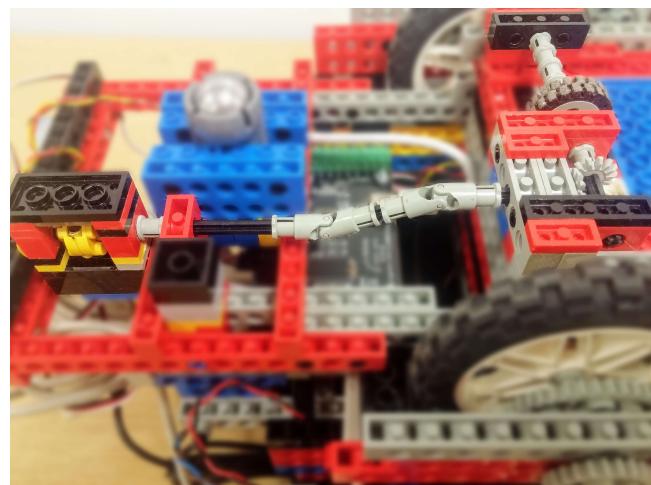


Figure 11:

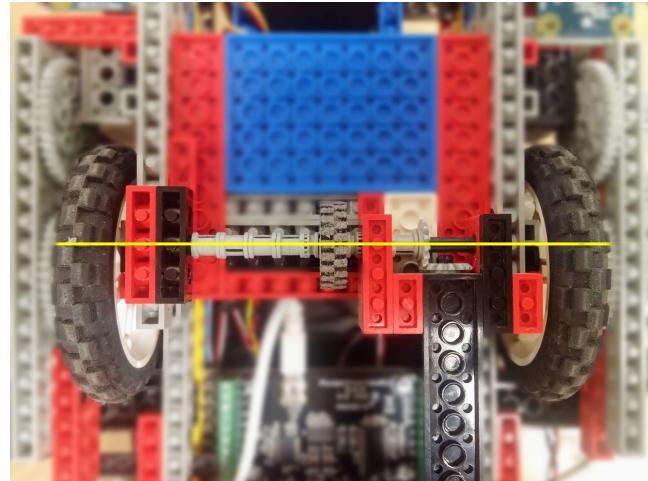


Figure 12:

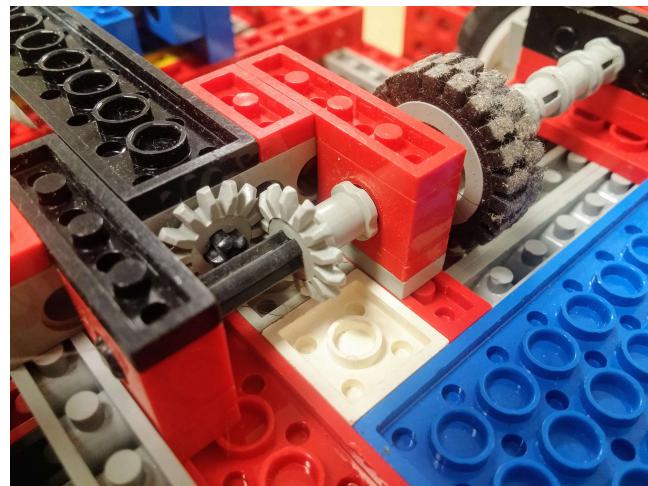


Figure 13:

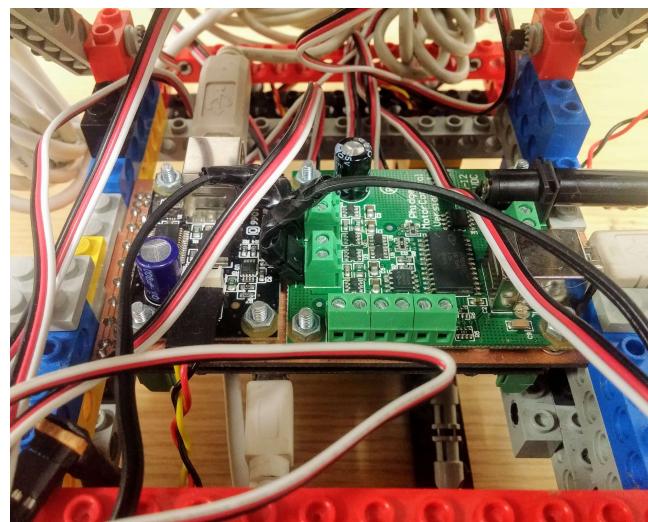


Figure 14:

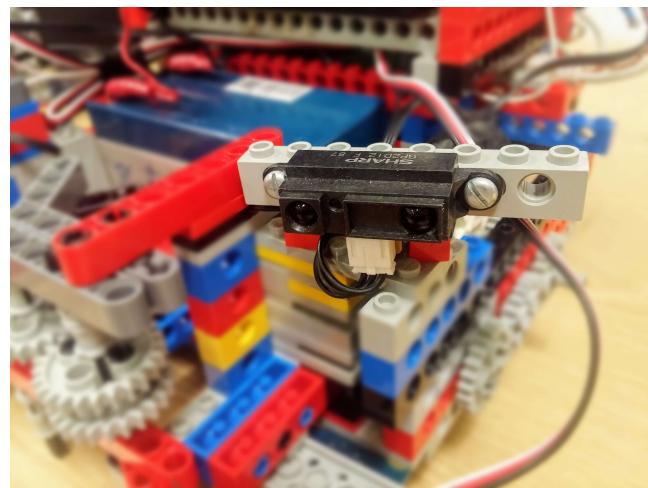


Figure 15:

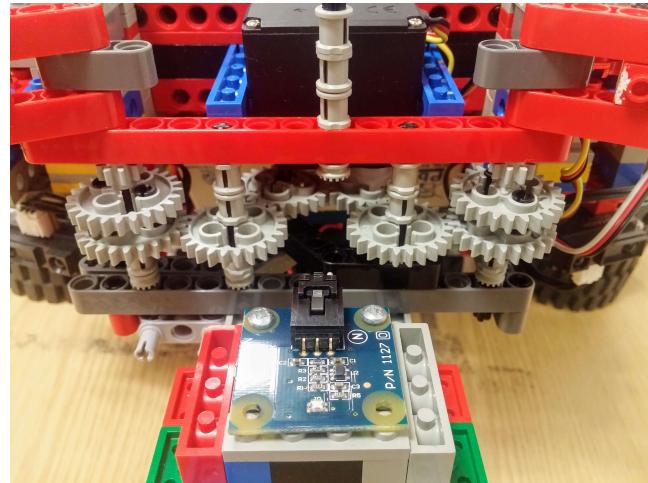


Figure 16:

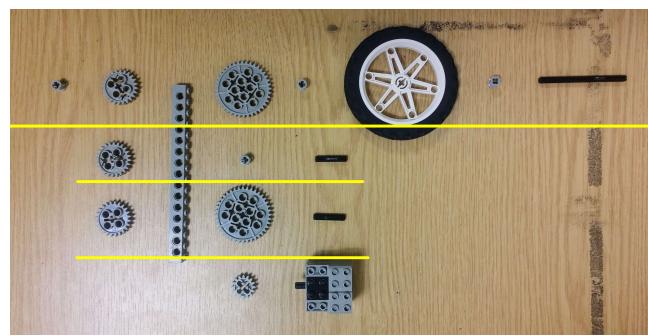


Figure 17:

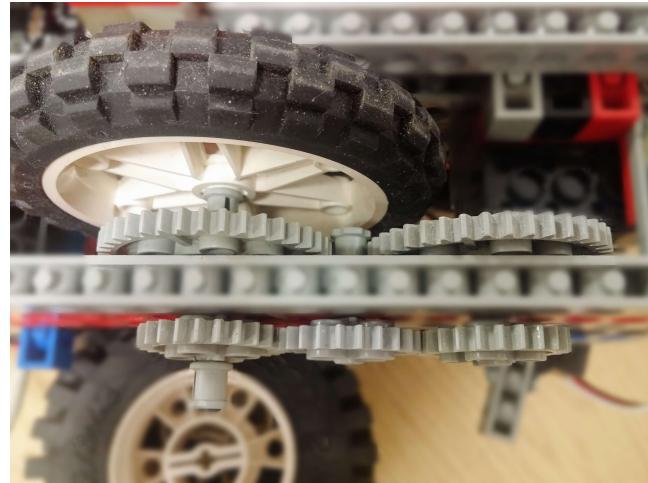


Figure 18:

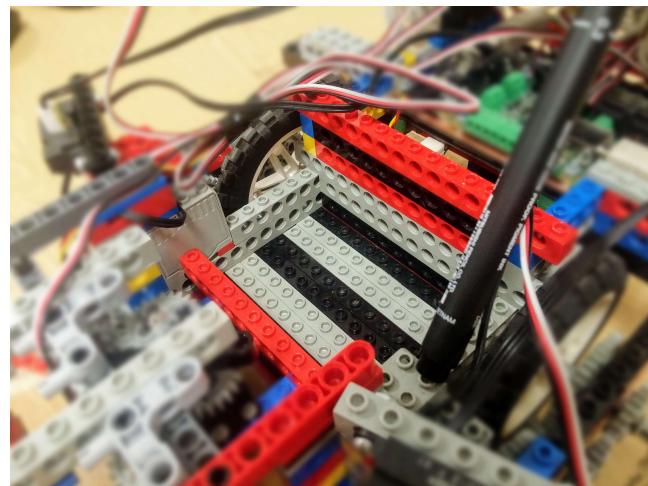


Figure 19:

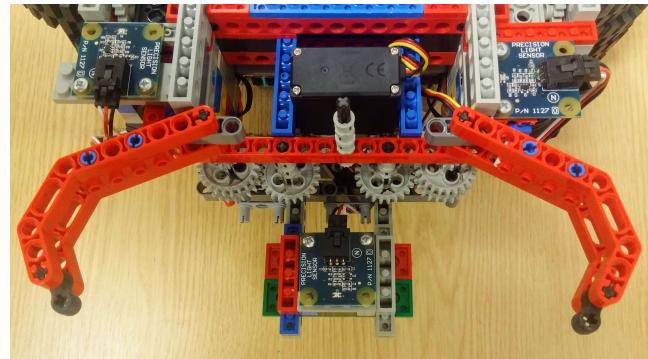


Figure 20:



Figure 21: