



# KTH MECHATRONICS ADVANCED COURSE

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FINAL REPORT

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## ESS-NW/ESS-CAR

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## Abstract

Abstract starts here, what should be included:

- The problem issue subject being addressed

- How the problem is tackled

- Overview of the results, and indication as to what level they solve the problem.

- Implications of the results

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## 1 Introduction

This report presents the process and results of two projects "Embedded Service for Self-adaptive Network" (ESS-NW) and "Embedded Service for Self-adaptive Car" (ESS-CAR).

### 1.1 Background

#### 1.1.1 Background subsection blabla

### 1.2 Project Description

#### 1.2.1 Project Description sub blabla

### 1.3 Delimitations

### 1.4 Readers guide / Report disposition

## 2 Literature Review and State of the Art

### 3 Methodology

- 3.1 Engineering approaches ?
- 3.2 Tool-chains ?
- 3.3 Project management



## 4 Implementation

### 4.1 System overview

maybe put communication diagram here

### 4.2 Communication between Beaglebones

### 4.3 Communication between Beaglebone and Arduino

### 4.4 Implementing the OS

### 4.5 Sensors

#### 4.5.1 Ultrasonic sensor

#### 4.5.2 Reflective object sensor

#### 4.5.3 Camera

### 4.6 Controlling actuators

#### 4.6.1 Steering servo

#### 4.6.2 Motor ESC

## 5 Verification and Validation

## 6 Results

## 7 Discussion and Conclusion

## 8 Future Work