

# Project report in ET 095G: (enter title of project)

Full name of student

September 6, 2021

## 1 Introduction

In this section you explain what is this project about in matter of functionality. For example: "In this project I introduce a smart camera node that I have designed for home surveillance. It relies on a vision sensor that captures the images in every clock cycle and processes them in real-time. The images where people are detected are stored in the microcontroller and send via network interface to a remote server... (and so on with the description of the system and how it operates)."

Give a detailed description of every user interaction component such as button press, joystick positioning, LED use or LCD, and every sensor/component used, with respect to the embedded system you have designed.

## 2 Implementation analysis

In this section you give a detailed description of how you designed the application, analysing every sensor/component used, how are they interconnected and all the implementation details.

### 2.1 Here you can put the name of a component used for example in my case it would be: Vision sensor

Explain how you interconnected this sensor to the microcontroller. Some example aspects you need to address in this subsection are: How are you controlling this sensor? Are you using timers or events? Are you storing the data? Are you sending the data to a server? How frequently you sample data and how is this controlled?

### 2.2 Another sensor/component used, e.g.: Network

Similar to the previous subsection, explain why you chose this component, how it improves your implementation, how it is connected to the system, and so on.

## 3 Discussion

In this section you analyse your project considering resource utilisation and optimisation. As we have seen in the lectures, a very important aspect in designing an embedded system is to efficiently use these constrained resources that are available. Hence, in this section explain what are the constraints to your design in a real world deployment (e.g. memory, energy consumption, real-time performance, hard real-time performance). What have you done in your implementation to address these constraints and optimise your design? What else is need for this application to be implemented in real-world scenario?