UNIVERSITAT POLITÈCNICA DE CATALUNYA
BARCELONATECH
Escola Tècnica Superior d'Enginyeria
de Telecomunicació de Barcelona

# Thesis title

Degree Thesis / Treball Fi de Grau / Trabajo Fin de Grado
submitted to the Faculty of the / realitzada a l' / realizada en la
Escola Tècnica d'Enginyeria de Telecomunicació de Barcelona
Universitat Politècnica de Catalunya
by / per / por

Student name

In partial fulfillment / En compliment parcial / En cumplimiento parcial
of the requirements for the degree in / dels requisits per al Grau en / de los requisitos para el Grado en
*(Write the name of your Degree)* **ENGINEERING**

Advisor / Director/ Directora: name of the advisor
Barcelona, Date XXXXX

**Note:** Please note this frontpage is provided in the three official languages. Please select one and delete this note as well.

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# Abbreviations

**ETSETB** Escola Tècnica Superior d'Enginyeria de Telecomunicació de Barcelona

**EU** European Union

# Abstract

Every copy of the thesis must have an abstract. An abstract must provide a concise summary of the thesis. In style, the abstract should be a miniature version of the thesis: short introduction, a summary of the results, conclusions or main arguments presented in the thesis. The abstract may not exceed 150 words for a Degree's thesis.

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# 1 Introduction

An Introduction that clearly states the rationale of the thesis that includes:

1. Statement of purpose (objectives).
2. Requirements and specifications.
3. Methods and procedures, citing if this work is a continuation of another project or it uses applications, algorithms, software or hardware previously developed by other authors.
4. Work plan with tasks, milestones and a Gantt diagram.
5. Description of the deviations from the initial plan and incidences that may have occurred.

The minimum chapters that this thesis document should have are described below, nevertheless they can have different names and more chapters can be added.

## 1.1 Gantt Diagram

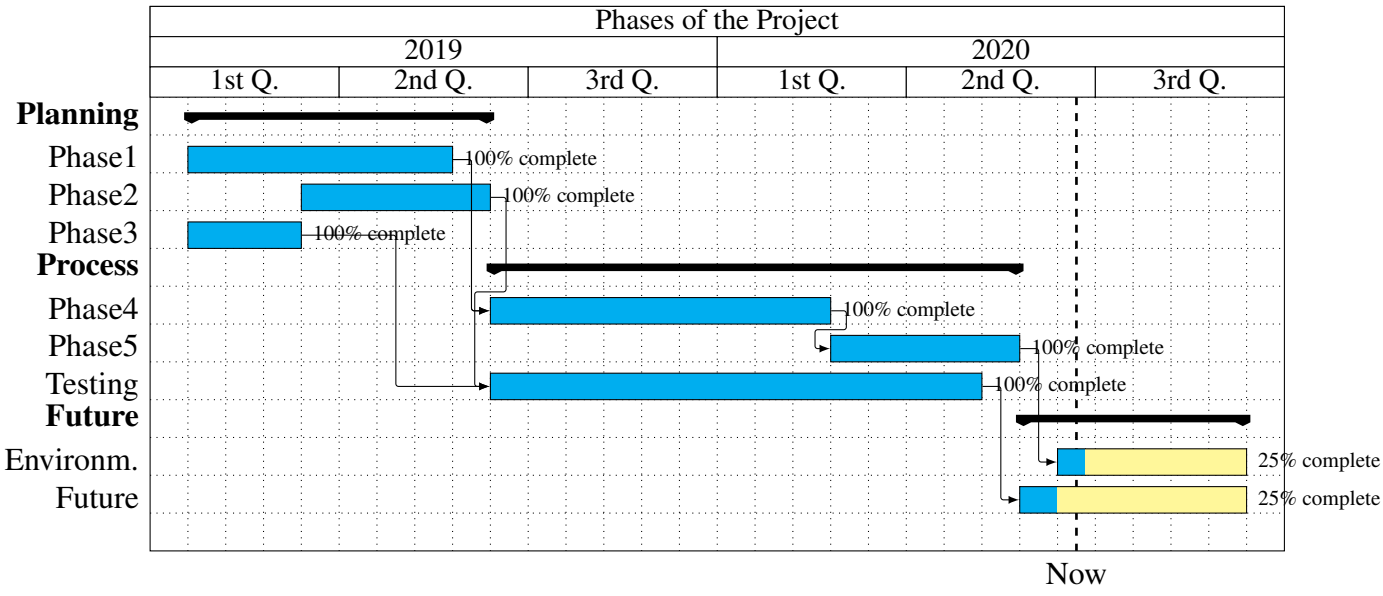


Figure 1: Gantt diagram of the project

For more information read the manual [1] of Skala.

## 1.2 Topic

# 2 State of the art of the technology used or applied in this thesis:

A background, comprehensive review of the literature is required. This is known as the Review of Literature and should include relevant, recent research that has been done on the subject matter.

## 2.1 Topic

Here you have a couple of references about LaTeX [2] and electrodynamics [3].

## 2.2 Topic

# 3 Section 3

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## 3.1 Subsection

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**Algorithm 1** Temperature-Distributed algorithm

**procedure** TEMP-SPREAD($GN_i, HN_j, temperatures$) ▷ Lowest temperature priority
  $temperature\_list \leftarrow short(temperatures)$
  $max_temperature \leftarrow max(temperature_list)$
  $ThresHold \leftarrow 0.5$
  $temperature\_impact \leftarrow 0.2$
  **for** $GN_i$ in $i = 1,8$ **do** ▷ Iterate every hardware node on the given GN
    $it\_temperature \leftarrow temperature\_list(GN_i)$
    $temp\_weight \leftarrow \frac{max\_temperature - it\_temperature}{max\_temperature} * temperature\_impact$
    $\omega(Master - GN_i) \leftarrow ThresHold * temp\_weight$
    **for** $HN_j$ in $j = 1,n$ **do**
      **if** $available\_accel_{i,j} > busy\_accel_{i,j}$ **then**
        $policy_\omega = \frac{AvailableHW}{TotalHW} * ThresHold$
        $\omega(GN_i - HN_{i,j}) \leftarrow ThresHold + policy_\omega$
      **else**
        $\omega(GN_i - HN_{i,j}) \leftarrow 1$
  $node \leftarrow find\_djistra\_shortest\_path(Master\_Node, aux\_node)$
  $returnnode\ b$ ▷ The gcd is b

# 4 Section 4

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## 4.1 Subsection 4.1

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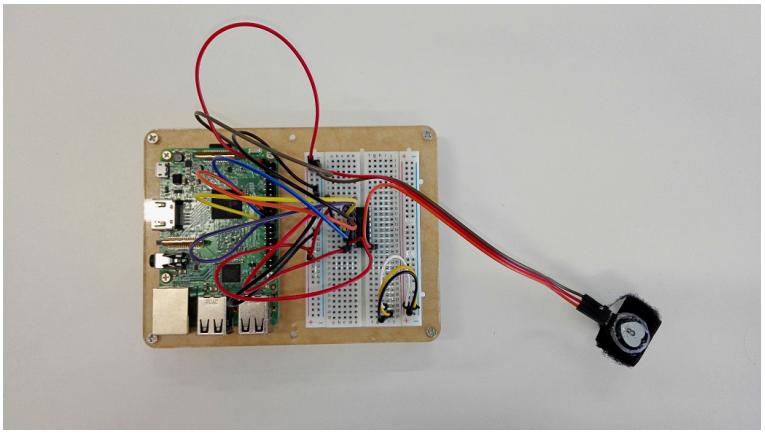

Figure 2: Prototype setup.

Etiam ac leo a risus tristique nonummy. Donec dignissim tincidunt nulla. Vestibulum rhoncus molestie odio. Sed lobortis, justo et pretium lobortis, mauris turpis condimentum augue, nec ultricies nibh arcu pretium enim. Nunc purus neque, placerat id, imperdiet sed, pellentesque nec, nisl. Vestibulum imperdiet neque non sem accumsan laoreet. In hac habitasse platea dictumst. Etiam condimentum facilisis libero. Suspendisse in elit quis nisl aliquam dapibus. Pellentesque auctor sapien. Sed egestas sapien nec lectus. Pellentesque vel dui vel neque bibendum viverra. Aliquam porttitor nisl nec pede. Proin mattis libero vel turpis. Donec rutrum mauris et libero. Proin euismod porta felis. Nam lobortis, metus quis elementum commodo, nunc lectus elementum mauris, eget vulputate ligula tellus eu neque. Vivamus eu dolor.

## 4.2 Subsection 4.2

Table 1: This is the other caption. Since the trial size of the experiments showed is one second, the number of *Target* and *Impostor* data corresponds to number of trials or seconds

| Dataset | Label | Train | Validation | Develop | Test |
|---|---|---|---|---|---|
| First | Target | 135 | 45 | 30 | 30 |
| | Impostor | 5,220 | 1,740 | 1,890 | 2,880 |
| | #Subjects | | 31 | | 12 |
| Second | Target | 144 | 80 | 48 | 48 |
| | Impostor | 2,014 | 1,119 | 1,343 | 1,545 |
| | #Subjects | | 15 | | 5 |

# 5 Section 5

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## 5.1 Overview

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# 6 Experiments and results

Morbi luctus, wisi viverra faucibus pretium, nibh est placerat odio, nec commodo wisi enim eget quam. Quisque libero justo, consectetuer a, feugiat vitae, porttitor eu, libero. Suspendisse sed mauris vitae elit sollicitudin malesuada. Maecenas ultricies eros sit amet ante. Ut venenatis velit. Maecenas sed mi eget dui varius euismod. Phasellus aliquet volutpat odio. Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae; Pellentesque sit amet pede ac sem eleifend consectetuer. Nullam elementum, urna vel imperdiet sodales, elit ipsum pharetra ligula, ac pretium ante justo a nulla. Curabitur tristique arcu eu metus. Vestibulum lectus. Proin mauris. Proin eu nunc eu urna hendrerit faucibus. Aliquam auctor, pede consequat laoreet varius, eros tellus scelerisque quam, pellentesque hendrerit ipsum dolor sed augue. Nulla nec lacus.

# 7 Budget

Depending on the thesis scope this document should include:

# 8 Environment Impact (Optional)

Whether the tasks that have led to the realization of this thesis, as if its results have identifiable environmental impact, describe it in this section.

# 9 Conclusions

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# 10 Future Work

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# References

[1] Wolfgang Skala. Drawing gantt charts in latex with tikz.

[2] Michel Goossens, Frank Mittelbach, and Alexander Samarin. *The LaTeX Companion*. Addison-Wesley, Reading, Massachusetts, 1993.

[3] Albert Einstein. Zur Elektrodynamik bewegter Körper. (German) [On the electrodynamics of moving bodies]. *Annalen der Physik*, 322(10):891–921, 1905.

[4] Donald Knuth. Knuth: Computers and typesetting.

# Appendices

Appendices may be included in your thesis but it is not a requirement.