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Background and Related Work

This chapter provides the reader with the relevant technical-scientific background as well as existing related products and research, also known as the state of the art, in the field(s) of the project.

Introduction

Provide here an overview of the contents (structure) of this chapter.

Concepts

Provide here all relevant concepts related to the topic(s) of the project

These are examples of citations to books **[1]** and **[2]**, a chapter on a smart companion **[3]**, articles on IoT **[4]**, blimps **[5]**, cloud computing **[6]**, gas emissions **[7]**, pedestrian crossing behaviour **[8]**, smart bicycles **[9]** and diaper moisture **[10]**, and to Web resources **[11]**, **[12]** and **[13]**.

Products

Search, select and describe related commercial solutions

Table 1 illustrates a boxed table with default column widths and Table 2 with specific column widths.

Table 1: Boxed table

Abbreviation	Description
EPS	European Project Semester
ISEP	Instituto Superior de Engenharia do Porto
USB	Universal Serial Bus

Table 2: Boxed table with specific column widths

Abbreviation	Description
EPS	European Project Semester
ISEP	Instituto Superior de Engenharia do Porto
USB	Universal Serial Bus

Table 3 shows the execution time results for each API. Table 4 lists the fruit bought at the grocery.

Table 3: Time response

API	Time (s)
EJML	26
JAMA	295
JBLAS	29
MTJ	18
WEKA	123

Table 4: Fruit Weight

Fruit	Weight (kg)
Pears	2.60
Apples	2.95
Oranges	1.90

Figure 1 displays a magnificent owl from Lapland.



Figure 1: Owl

Figure 2 illustrates the placement of two images side by side.

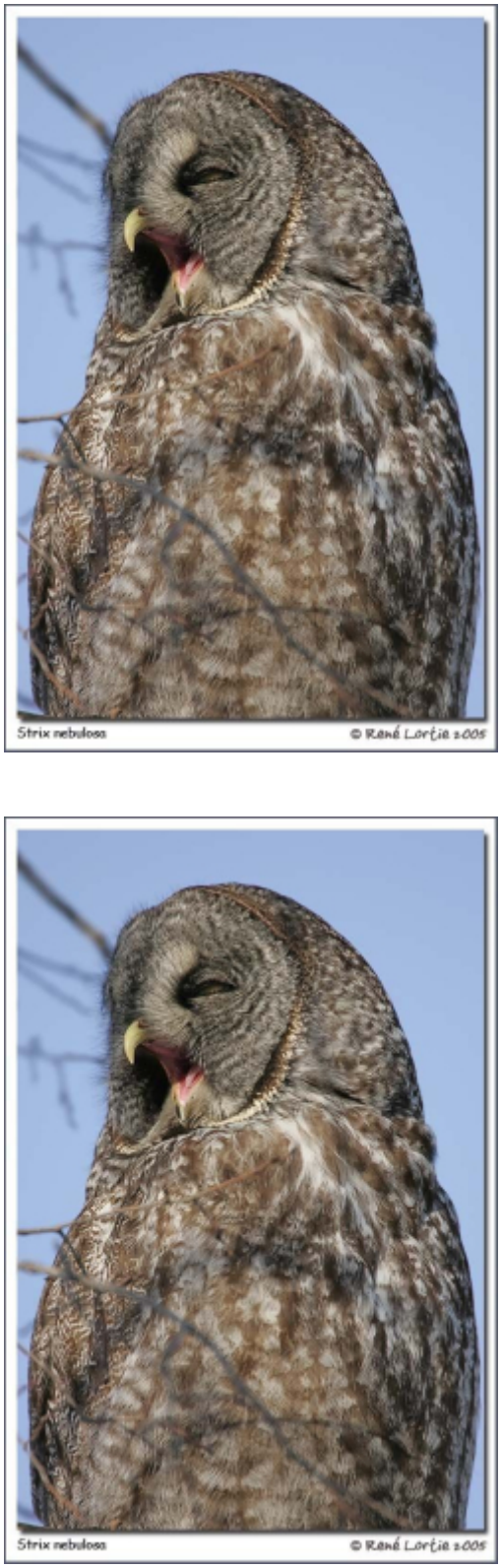


Figure 2: Images side by side

Figure 3 presents the European Project Semester (EPS) logo.



Figure 3: EPS logo

Projects

Search, select and describe related research projects

Comparative Analysis

Compare selected products and projects considering the requirements of your own solution

Summary

Provide here the conclusions of this chapter and make the bridge to the next chapter.

Based on this study of the state of the art, the team decided to adopt the following <specify here the architecture, technique(s), material(s), component(s)> because <specify here the technical/scientific reasons>.

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[3] Alexandre Soares dos Reis, Elien Gielen, Ko Wopereis, Marcel Pasternak, Vaido Sooäär, Tobias Schneider, Abel J. Duarte, Benedita Malheiro, Jorge Justo, Cristina Ribeiro, Manuel F. Silva, Paulo Ferreira, Pedro Guedes, 2020. Smart Companion Pillow – An EPS@ISEP 2019 Project. *Robot 2019: Fourth Iberian Robotics Conference*, Cham: Springer International Publishing, pp.465–476, ISBN 978-3-030-36150-1.
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