



UNIVERSITÀ
DEGLI STUDI
DI PADOVA



DIPARTIMENTO
DI INGEGNERIA
DELL'INFORMAZIONE

BACHELOR THESIS IN COMPUTER ENGINEERING

**Sviluppo e testing di Software conforme allo
standard IEEE 3302-2022 per una codifica audio ad
alta qualità per la conservazione del patrimonio
culturale musicale utilizzando un approccio
Test-Driven Development**

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ACADEMIC YEAR
2022/2023

*To my parents
and friends*

Abstract

Sommario

Contents

List of Figures	xi
List of Tables	xiii
List of Algorithms	xvii
List of Code Snippets	xvii
List of Acronyms	xix
1 Introduction	1
1.1 A section	1
1.1.1 A subsection	1
2 Background	3
3 Analysis	5
3.1 A section	5
4 Conclusions and Future Works	7
References	9
Acknowledgments	11

List of Figures

3.1	Image created with TikZ	5
-----	-----------------------------------	---

List of Tables

4.1	Table example	7
-----	-------------------------	---

List of Algorithms

1	An algorithm with caption	3
---	-------------------------------------	---

List of Code Snippets

3.1	Code snippet example	5
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List of Acronyms

CSV Comma Separated Values



Introduction

Random citation [1].
Random footnote.¹

1.1 A SECTION

EXAMPLE OF LIST

- Item 1
- Item 2

1.1.1 A SUBSECTION

EXAMPLE OF ACRONYM

Comma Separated Values (CSV)

EXAMPLE OF ENUMERATION

1. Item 1
2. Item 2

¹<https://lucamartinelli.eu.org>

1.1. A SECTION

EXAMPLE OF QUOTE

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Background

Algorithm 1 An algorithm with caption

Require: $n \geq 0$

Ensure: $y = x^n$

$y \leftarrow 1$

$X \leftarrow x$

$N \leftarrow n$

while $N \neq 0$ **do**

if N is even **then**

$X \leftarrow X \times X$

$N \leftarrow \frac{N}{2}$ {This is a comment}

else if N is odd **then**

$y \leftarrow y \times X$

$N \leftarrow N - 1$

end if

end while

$$e^{j\pi} + 1 = 0 \tag{2.1}$$



Analysis

3.1 A SECTION

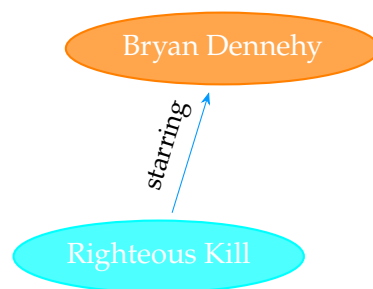


Figure 3.1: Image created with TikZ

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```
1 import numpy as np
2
3 def incmatrix(genl1,genl2):
4     m = len(genl1)
5     n = len(genl2)
6     M = None #to become the incidence matrix
```

3.1. A SECTION

```
7     VT = np.zeros((n*m,1), int)  #dummy variable
8
9     test = "String"
10
11     #compute the bitwise xor matrix
12     M1 = bitxormatrix(genl1)
13     M2 = np.triu(bitxormatrix(genl2),1)
14
15     for i in range(m-1):
16         for j in range(i+1, m):
17             [r,c] = np.where(M2 == M1[i,j])
18             for k in range(len(r)):
19                 VT[(i)*n + r[k]] = 1;
20                 VT[(i)*n + c[k]] = 1;
21                 VT[(j)*n + r[k]] = 1;
22                 VT[(j)*n + c[k]] = 1;
23
24             if M is None:
25                 M = np.copy(VT)
26             else:
27                 M = np.concatenate((M, VT), 1)
28
29             VT = np.zeros((n*m,1), int)
30
31     return M
```

Code 3.1: Code snippet example



Conclusions and Future Works

A	B
C	D
E	F
G	H

Table 4.1: Table example

References

- [1] Marco Alecci et al. “Development of an IR System for Argument Search.” In: *CLEF (Working Notes)*. 2021, pp. 2302–2318.

Acknowledgments