



UNIVERSITÀ  
DEGLI STUDI  
DI PADOVA



DIPARTIMENTO  
DI INGEGNERIA  
DELL'INFORMAZIONE

BACHELOR THESIS IN COMPUTER ENGINEERING

## An interesting title for the thesis

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*To my parents  
and friends*



## **Abstract**



## **Sommario**





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# List of Acronyms

**CSV** Comma Separated Values





# Introduction

Random citation [1].  
Random footnote.<sup>1</sup>

## **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

---

<sup>1</sup><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

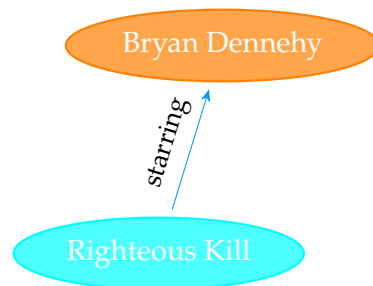


Figure 3.1: Image created with TikZ

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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

<b>A</b>	<b>B</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