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DEGLI STUDI  
DI PADOVA



DIPARTIMENTO  
DI INGEGNERIA  
DELL'INFORMAZIONE

MASTER 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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Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.



## 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

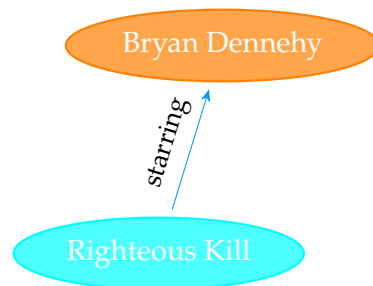


Figure 3.1: Image created with TikZ

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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