



MASTER OF SCIENCE
IN ENGINEERING

Hes·SO

Haute Ecole Spécialisée
de Suisse occidentale

Fachhochschule Westschweiz

University of Applied Sciences and Arts
Western Switzerland

Master of Science HES-SO in Engineering
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Orientation: Data Science (DS)

Rooftops

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Declaration of honor

I, undersigned, Iglesias Garcia Denis, hereby declare that the work submitted is the result of a personal work. I certify that I have not resorted to plagiarism or other forms of fraud. All sources of information used and the author quotes were clearly mentioned.

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Acknowledgments

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Preface

A preface is not mandatory. It would typically be written by some other person (eg your thesis director).

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Lausanne, 12 Mars 2011

T. D.

Abstract

Abstract in English

Key words: keyword1, keyword2, keyword3

Résumé

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Mots clés: motclé1, motclé2, motclé3

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1 | Introduction

1.1 Context

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1.2 Objectives

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1.2.1 Sub-objectives

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Sub-sub-objectives

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1.3 Structure of this report

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2 | Analysis

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2.5	Conclusion 6

State of the art in machine learning applied to object detection in images

Introduction

Definition of Object detection, classification, semantic segmentation, instance segmentation, and their differences.

State of the art in solar potential in buildings at scale

TODO: Faire un résumé des articles de M. Desthieux sur le sujet.

This chapter shows example of picture and also serves to populate the different lists: list of figures, list of tables, bibliography, and glossary.

2.1 Tables

This section contains an examples of table: Table 2.1

name	weight	food
mouse	10 g	cheese
cat	1 kg	mice
dog	10 kg	cats
t-rex	10 Mg	dogs

Table 2.1 *A floating table.*

2.2 Figures

This section contains examples of figures: Figure 2.1, Figure 2.2a, Figure 2.2b, Figure 2.2c, Figure 2.2d

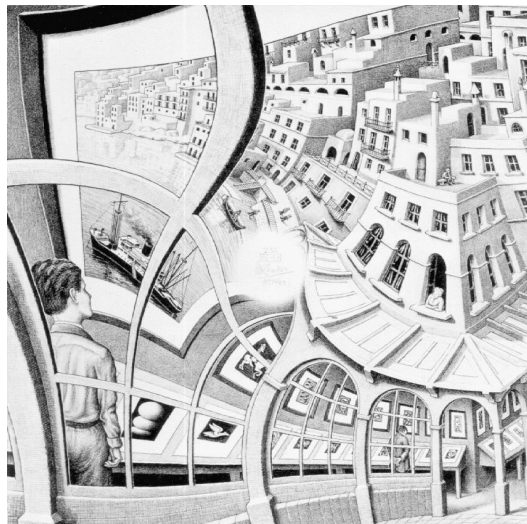


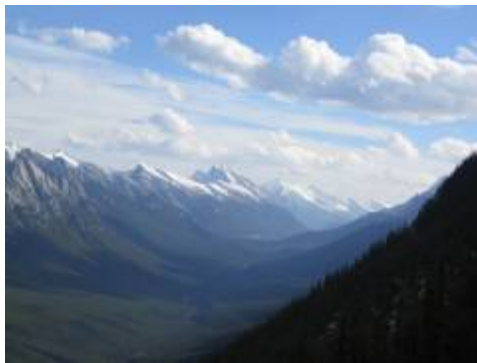
Figure 2.1 *A floating figure: the lithograph Galleria di stampe, of M. Escher*
Source: <http://www.mcescher.com/>



(a) A gull



(b) A tiger



(c) A mouse



(d) A mouse

Figure 2.2 Example subcaption

2.3 Code

Listing 2.1 shows an example of Java code rendered with minted.

```
/**
 * The HelloWorldApp class implements an application that
 * simply prints "Hello World!" to standard output.
 */
class HelloWorldApp {
    public static void main(String[] args) {
        System.out.println("Hello World!"); // Display the string.
    }
}
```

Listing 2.1 Example of listing using the minted package

2.4 Other features

Term (glossaries): NoSQL

Acronym (glossaries): Structured Query Language (SQL)

Citation (biblatex): [1]

2.5 Conclusion

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3 | Design

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3.1 Short lists

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1. First item in a list
2. Second item in a list
3. Third item in a list
4. Fourth item in a list
5. Fifth item in a list

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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First item in a list

Second item in a list

Third item in a list

Fourth item in a list

Fifth item in a list

3.2 Long lists

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written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Second item in a list Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Third item in a list Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Fourth item in a list Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Fifth item in a list Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

3.3 Multi-level lists

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This

text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

- First item in a list
 - First item in a list
 - * First item in a list
 - * Second item in a list
 - * Third item in a list
 - * Fourth item in a list
 - * Fifth item in a list
 - Second item in a list
 - Third item in a list
 - Fourth item in a list
 - Fifth item in a list

- Second item in a list
- Third item in a list
- Fourth item in a list
- Fifth item in a list

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

1. First item in a list
 - (a) First item in a list
 - i. First item in a list

- ii. Second item in a list
- iii. Third item in a list
- iv. Fourth item in a list
- v. Fifth item in a list

- (b) Second item in a list
- (c) Third item in a list
- (d) Fourth item in a list
- (e) Fifth item in a list

- 2. Second item in a list
- 3. Third item in a list
- 4. Fourth item in a list
- 5. Fifth item in a list

3.4 Conclusion

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4 | Implementation

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4.3	Conclusion	16

4.1 Section 1

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4.2 Section 2

4.3 Conclusion

5 | Validation

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5.1	Section 1	18
5.2	Section 2	18
5.3	Conclusion	19

5.1 Section 1

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5.2 Section 2

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5.3 Conclusion

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6 | Conclusions

- 6.1 Project summary**
- 6.2 Comparison with the initial objectives**
- 6.3 Encountered difficulties**
- 6.4 Future perspectives**

A | An appendix

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