



ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE

# **SUPER-RESOLUTION OFF THE GRID**

EPFL - SEMESTER PROJECT IN COMPUTER SCIENCE

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## ABSTRACT

Super-Resolution is the tool that allows us to upgrade the quality of images. The goal of this project is to study a recent paper on super-resolution and discuss the main algorithm in order to eventually find an improvement using information theoretical bounds.

“ *In theory, theory and practice are the same. In practice, they are not.* ”

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Albert Einstein

# **CHAPTER 1**

## **INTRODUCTION**

## **CHAPTER 2**

# **MATHEMATICAL REFRESHER**

## **CHAPTER 3**

# **RESULTS AND DISCUSSION**

## **CHAPTER 4**

# **IMPROVEMENT**

## **CHAPTER 5**

## **CONCLUSION**