



SCHOOL OF COMPUTER AND  
COMMUNICATION SCIENCES

ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE

**Computer Vision Laboratory**  
**Unseen Spacecraft Pose Estimation**

Baseline implementation of a generalizable 6DoF object  
pose estimator with target models included

Bachelor's Thesis in Computer Science

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I hereby confirm that I am the sole author of the written work here enclosed and that I have compiled it in my own words. Parts excepted are corrections of form and content by the advisors.

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## Abstract

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# **1 Introduction**

## **1.1 Problem statement**

### **1.1.1 The settings**

### **1.1.2 The goal**

## **1.2 The work environment: Scitas Izar**

## **2 Scientific papers review**

### **2.1 Some ML models**

### **2.2 Gen6D: Pros and cons**

## **3 Gen6D: formal description**

### **3.1 The dectector**

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## **4 Implementation of the model**

### **4.1 The data loader**

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### **4.3 Their solutions**

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## **5 Presentation of the results**

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## **6 Ways of improvements**

**6.1 Track No. 1**

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## 7 Conclusion

## Abbreviations

## Appendix