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# Refactoring of a Software System for Industry 4.0

## **Bachelor Thesis**

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Bachelor of Arts in Business Administration

submitted to  
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Institute of Computer Science

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# Abstract

This is a placeholder for the abstract. It summarizes the whole thesis to give a very short overview. Usually, this the abstract is written when the whole thesis text is finished.

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# 1 Introduction

## **2 Exploration of the Fourth Industrial Revolution**

### **2.1 Terminology and Context**

### **2.2 Defining Smart Factories**

### **2.3 Economic Relevance**

## 3 Theoretical Framework for Code Refactoring

### 3.1 Background

Let's cite! Einstein's journal paper (Kim et al., [2012](#)) and Dirac's fantastic book (Martin, [2008](#)) are physics-related items.

### 3.2 Formalisation of Design Patterns

### 3.3 The Business Case for Refactoring

### 3.4 Thesis Context

## **4 Methodological approach**

### **4.1 Motivation and Procedure**

### **4.2 Means of data collection**

### **4.3 Methods of analysis**

### **4.4 Limitations and justification**



## 5 Main Findings

## 6 Discussion

## 7 Conclusion

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# Appendix

## Bibliography

- Kim, M., Zimmermann, T., & Nagappan, N. (2012). A field study of refactoring challenges and benefits. *Proceedings of the ACM SIGSOFT 20th International Symposium on the Foundations of Software Engineering*, 1–11. <https://doi.org/10.1145/2393596.2393655> (cit. on p. 3)
- Martin, R. (2008, August 1). *Clean Code: A Handbook of Agile Software Craftsmanship* (1st edition). Prentice Hall. (Cit. on p. 3).