

Reducing the runtime of an NP-Hard algorithm using deep learning on historical data

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September 3, 2025

Abstract

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Chapter 1

Introduction

1.1 Background

This thesis is an extension to the Volvo Truck Assembly Line problem (?); Today trucks are placed manually by management workers based solely on their own knowledge, though this is not written down anywhere. The algorithm in the works will use data from Volvo to help place the trucks so that there are as few overlaps as possible. My idea is that the algorithm can gain a faster runtime by defaulting to "safe" combinations which are already used today.

1.2 Research Problem

1.3 Objectives

I WANNA BE AN ENGINEER

1.4 Thesis Structure

Chapter 2

Literature Review

2.1 Theoretical Framework

2.2 Previous Work

2.3 Research Gaps

Chapter 3

Machine Learning

3.1 Why Machine Learning

3.2 Data Collection

3.3 Data Analysis

Chapter 4

Results

4.1 Findings

4.2 Data Presentation

Chapter 5

Discussion

5.1 Interpretation of Results

5.2 Comparison with Literature

5.3 Implications

Chapter 6

Conclusion

6.1 Summary of Findings

6.2 Limitations

6.3 Future Work

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Appendix A

Appendix A

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