Technische Universität Berlin

Big Data Engineering (DAMS)

Fakultät IV

Ernst-Reuter-Platz 7

10587 Berlin

https://www.tu.berlin/dams

Thesis

[Choose yours: Bachelor or Master's]

An Experimental Analysis of Approach X

Your Name

Matriculation Number: 1234567

01.01.2024

Supervised by

Prof. Dr. Matthias Boehm

<Co-Supervisor>

Hereby I declare that I wrote this thesis myself with the help of no more than the mentioned literature and auxiliary means.

Berlin, 01.01.2024

. . . .
(Signature) [your name]

Abstract

1. State the problem

2. Say why it's an interesting problem

3. Say what your solution achieves

4. Say what follows from your solution

Additional information on how to structure the abstarct can be found here: `https://mboehm7.github.io/teaching/ws2122_isw/01_Introduction.pdf`, slide 20.

Zusammenfassung

This is a placeholder for the german abstract (Kurzfassung) which should follow the same structure as the abstract.

Contents

1 Introduction

This chapter is a placeholder for the introduction of your thesis.

The first paragraph of the introduction should describe the *context*, followed by 1-3 paragraphs stating the *problems* that are solved in this thesis. The next paragraph should mention *existing work* before introducing the *idea* on how to solve the mentioned problems.

Contributions: In the last paragraph list your contributions and outline the thesis as a list of bullet points containing a short introduction into the chapters.

Additional information can be found here: `https://mboehm7.github.io/teaching/ws2122_isw/01_Introduction.pdf`, slide 21.

1 Introduction

2 Background

This section is intended to give an introduction about relevant terms and methods used in your work.

Start by outlining the content that will be presented in this chapter, referencing the individual sections.

Section 2.1 introduces method xyz, Section 2.2 gives an overview about abc.

Important: Ensure proper references of the mentioned approaches using the *cite* command in descending order e.g.:[1, 2].

2.1 Section Title 1

Always provide a paragraph outlining the content of the current section.

2.1.1 Sub Section Title 1

...

2.1.2 Sub Section Title 2

...

2.2 Section Title 2

...

3 Design

This chapter elaborates on the problem that this thesis tries to solve and explains the individual methods used for solving the problem.

4 Experiments

This chapter provides details about the experiments conducted within the context of this thesis.

4.1 Experimental Setup

All experiments are caried out on machine XYZ.

4.2 Results for Experiment A

Figure 4.1 illustrates the situation between Alice and Bob. (sequence diagram from www.websequencediagrams.com)
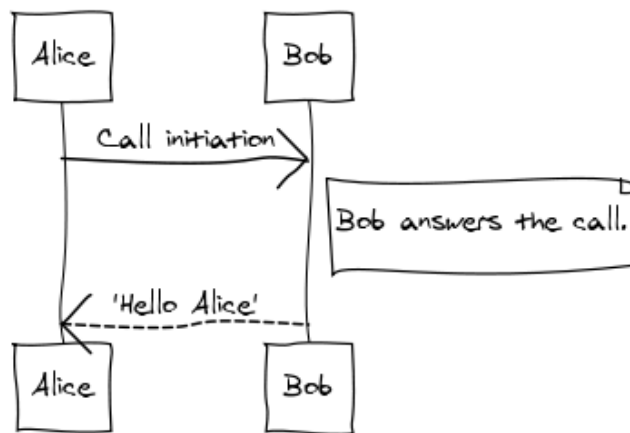

Figure 4.1: Alice and Bob

4.3 Results for Experiment B

In Table 4.1 the statistics for...

Dateset	Minimum y	Maximum y	Average y
DS 1	-68.57	506.78	86.05
DS 2	-0.18	537.67	102.51

Table 4.1: This table shows the statistics (minimum, maximum, and average) for the different datasets.

4.4 Discussion of Results

...

5 Related Work

This chapter provides insights into additional related work that was not mentioned in the background chapter.

5 Related Work

6 Conclusions

This chapter summarizes the contriubtions of the thesis and provides an outlook into future work.

List of Acronyms

ML   Machine Learning

List of Acronyms

Bibliography

[1] Matthias Boehm et al. "SystemDS: A declarative machine learning system for the end-to-end data science lifecycle". In: *arXiv preprint arXiv:1909.02976* (2019).

[2] Arun Kumar, Matthias Boehm, and Jun Yang. "Data management in machine learning: Challenges, techniques, and systems". In: *Proceedings of the 2017 ACM International Conference on Management of Data.* 2017, pp. 1717–1722.

Bibliography

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Appendix

Add additional experimental results that do not need to be directly included in the thesis body.