



**FACULTY
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AND PHYSICS**
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MASTER THESIS

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Entity Relationship Extraction

Institute of Formal and Applied Linguistics

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Dedication.

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Contents

Introduction	2
1 Datasets	3
1.1 tacred dataset	3
1.2 SEMEVAL 2010 task 8 dataset	3
2 Title of the second chapter	4
2.1 Title of the first subchapter of the second chapter	4
2.2 Title of the second subchapter of the second chapter	4
Conclusion	6
Bibliography	7
List of Figures	8
List of Tables	9
List of Abbreviations	10
A Attachments	11
A.1 First Attachment	11

Introduction

There has been made noticeable progress in natural language processing since the first deep neural networks attempts. With multiple new approaches and inventions such as multitask learning, word embeddings, RNN, attention and the transformer architecture. Last year Devlin et al. [2018] created BERT and managed to achieve state-of-the-art performance in eleven natural language processing tasks, including GLUE (7.7% point absolute improvement), MultiNLI accuracy (4.6% absolute improvement) and SQuAD problems.

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In this thesis, we will try to use those novel approaches to predict relation between two entities based on a Czech sentence. First part of this thesis will be focused on data. We will introduce some existing English datasets for Entity Relation Extraction. Than we will describe how we prepared data for Czech version of this task using distant supervision on Czech Wikipedia and Wikidata. Second part

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1. Datasets

An example citation: Anděl [2007]

1.1 `tacred` dataset

1.2 `SEMEVAL 2010 task 8` dataset

2. Title of the second chapter

2.1 Title of the first subchapter of the second chapter

2.2 Title of the second subchapter of the second chapter

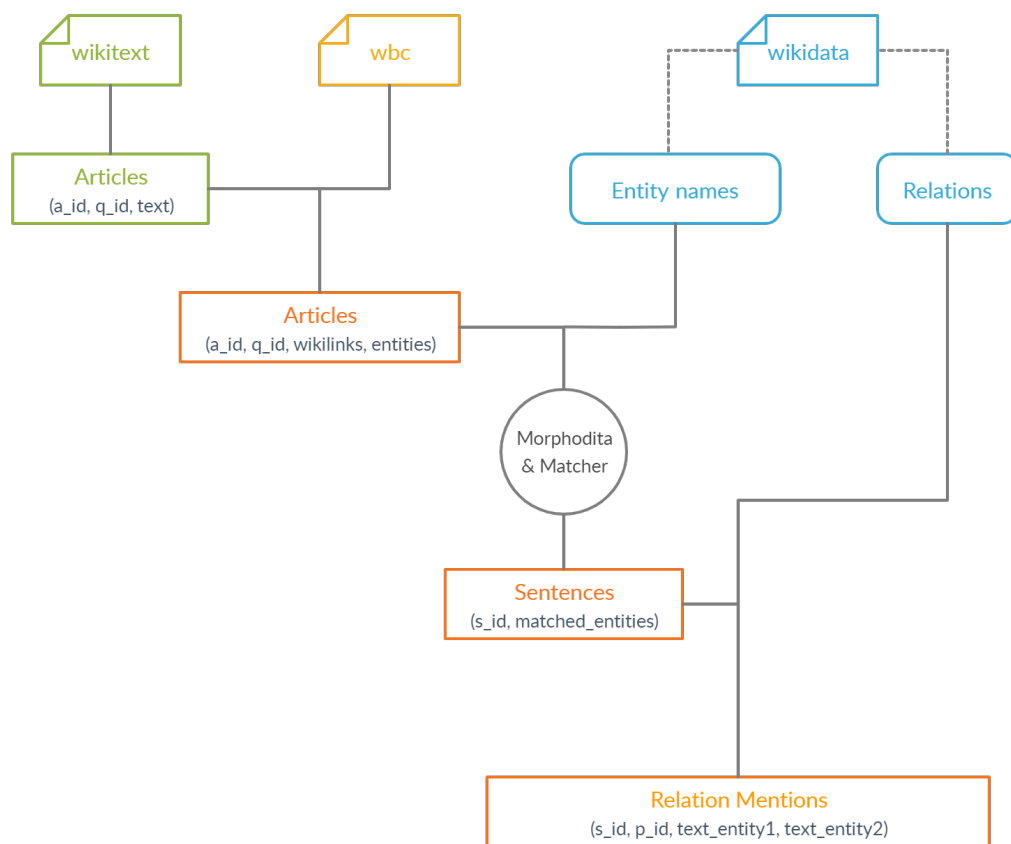


Figure 2.1: Zjednodušený diagram výroby korpusu

Conclusion

Bibliography

J. Anděl. *Základy matematické statistiky*. Druhé opravené vydání. Matfyzpress, Praha, 2007. ISBN 80-7378-001-1.

Jacob Devlin, Ming-Wei Chang, Kenton Lee, and Kristina Toutanova. Bert: Pre-training of deep bidirectional transformers for language understanding. *arXiv preprint arXiv:1810.04805*, 2018.

List of Figures

2.1	Zjednodušený diagram výroby korpusu	5
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List of Tables

List of Abbreviations

A. Attachments

A.1 First Attachment