



UNIVERSITÄT ZU LÜBECK

Hello World

Hallo Welt

Masterarbeit

verfasst am

Institut für Informationssysteme

im Rahmen des Studiengangs

Informatik

der Universität zu Lübeck

vorgelegt von

Jakob Horbank

ausgegeben und betreut von

Prof. Dr. Ralf Möller

Lübeck, den 15. April 2024

Eidesstattliche Erklärung

Ich erkläre hiermit an Eides statt, dass ich diese Arbeit selbständig verfasst und keine anderen als die angegebenen Quellen und Hilfsmittel benutzt habe.

Jakob Horbank

Zusammenfassung

Es geht darum, der Welt »Hallo« zu sagen.

Abstract

It is about saying “hello” to the world.

Contents

1	Introduction	1
1.1	Contributions of this Thesis	1
1.2	Related Work	1
1.3	Structure of this Thesis	2
2	Main Chapter	3
3	Conclusion	4
	Bibliography	5

1

Introduction

1.1 Contributions of this Thesis

This thesis says “Hello World!”, see also [1].

1.2 Related Work

There are many hello world programs.

Transformer

Transformer Netzwerke sind supertoll. Encoder-Decoder architecture gained traction as they allowed for the computation of better intermediate representation of the data.

BERT

Bert is the Ernie’s best friend.

Generative Pre-Trained Transformer

I like GPT because ChatGPT is cool lets goooo.

InstructGPT

With InstructGPT OpenAI(lol) added some magic to the whole thingy. They gave people in nigeria below minimum wage and asked them to rate GPT outputs and trained a reward model that can fine-tune GPT according to human needs. They call this Reinforcement Learning with Human Feedback (RLHF).

Aligning language models is a central research area in creating intelligent systems that humans want to use. As baseline LLMs are training on huge datasets containing all kinds of text documents, the outputs are not necessarily tailored for the questioners needs. Rather, they input sequence is simply continued with the most likily next tokens. InstructGPT are a family of LLMs created by OpenAI that are fine-tuned with human feedback. With this

procedure the models are better at capturing the intent of the user. Furthermore there are improvements in hallucinations and false information.

Information Retrieval Agents

Information is cool and so is retrieving it. But that is hard, because most information is useless. As an example, watch any markus lanz episode.

1.3 Structure of this Thesis

In Chapter 2 on the following page, we say hello.

2

Main Chapter

I don't know what I am going to do, but i know it's going to be fun siuuuuu.

3

Conclusion

Saying hello world is quite easy.

Bibliography

- [1] Kernighan, B. *Programming in C – A Tutorial*. Tech. rep. Bell Laboratories, 1974.