Peter Schoener

Experience

Amazon Web Services

February 2022 – June 2023 **Machine Learning Engineer, AWS Bedrock**

Contributed to all components of Bedrock Inference Service, as well as contact surfaces of Frontend Service, at all stages from design to operational support.

Documented service functionality, onboarded and trained teammates, and drove discussion of CL/science-side research to promote deep understanding of the product.

November 2021 – February 2022 **Machine Learning Engineer, AWS Comprehend**

Maintained and troubleshot model hosting environments. Participated in design and proof-of-concept implementation for what would later become Bedrock Inference.

Jiseki Health

March 2021 – September 2021 **Natural Language Processing Engineer**

Increased effectiveness and scalability of whole-person health service delivery by designing and building chatbots and text-based assistants.

Alan Voice AI

October 2020 – March 2021 **Machine Learning Consultant**

Enhanced multimodal voice assistant effectiveness by designing and implementing application-specific sentence representation models.

June 2020 – October 2020 **Intern**

Researched, designed, and implemented various machine learning models for natural language understanding.

Kamusi GOLD (EPFL)

June 2017 – April 2018 **Intern**

Broadened applications of Kamusi's GOLD transliteration dictionary and related software by leading development of an abstractive statistical transliteration model.

Eberhard Karls Universität Tübingen

November 2017 – March 2018 **Teaching Assistant**

Clearly explained concepts, effectively answered student questions, and gave meaningful feedback in a 3rd semester DSA/Java course.

November 2016 – May 2017 **Research Assistant**

Increased test subject availability by building LTI-compliant web applications to replace in-person experiments for a language learning study.

Research

Partial Word Learning from Referentially Ambiguous Naming Events

as co-author, published in proceedings of CogSci 2023

Contribution to a study of cognitive mechanisms behind word acquisition. Advised on the nature and use of embedding models for a semantic similarity analysis, trained models, and gathered test results.

A Neural Approach to Semantic Compatibility of Nouns and Adjectives on the Basis of Word Embeddings

B.A. Thesis. Advisor: Dr. Daniël de Kok

Original work on predicting semantic compatibility of arbitrary noun-adjective pairs for the SFB A3 embedding composition project at the University of Tübingen as well as the dependency parsing project. Uses a neural approach to reliably predict the semantic compatibility of a noun-adjective pair.

Identification of Semantic Shifts in English Using Word Embeddings

coursework for Unsupervised Learning. Professor: Dr. Çagri Çöltekin

Reimplementation of Kutuzov and Kuzmenko, 2018 with some adjustment as per Leeuwenberg et al., 2016 and reapplication to shifts over time rather than domain, with qualified success.

Skills

Technologies

AWS SageMaker, EC2, Lambda, DDB, CDK
Python PyTorch, HF transformers, DeepSpeed, NumPy, AWS/SM SDKs
Java AWS SDK, DJL
nVidia DCGM, device and driver troubleshooting
(ba)sh wide variety of text processing utilities

Methods

- NNs, especially recursive and LSTM/Transformer architectures, including GPT, T5, and BERT
- word and phrase embeddings, particular interest in composition and Poincaré space
- efficient linear algebra/tensor operation use

Soft skills

- writing for academic, engineering, and product audiences
- quick and effective communication, incl. teaching and internal documentation
- linear algebra, statistics, and mathematical logic

Education

2018 – 2020 **University of Washington, Seattle**
MS Computational Linguistics

2015 – 2018 **Eberhard Karls Universität Tübingen**
BA Computational Linguistics

Contact

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