Kevin Stowe, PhD.

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SUMMARY

Research scientist and natural language processing/artificial intelligence professional with 10+ years of experience. Strong knowledge of NLP and machine learning practices, including language modeling, natural language generation, lexical semantics, deep learning, and text classification. Professional experience in software development, data analysis, annotation, and model training/deployment. Passion for responsible Al, trust and safety, and mitigating societal harms.

WORK EXPERIENCE

RESEARCH SCIENTIST (NLP) | EDUCATIONAL TESTING SERVICE (ETS)

2024 - Present

2022 - 2024 | Associate Research Scientist (NLP)

- Automated Content Generation (ACG): building cost-saving generation methods for thousands of items over dozens of item types for testing/educational applications.
- Develop and implement research and infrastructure roadmaps for generative AI software, incorporating state-of-the-art LLM prompting and sequence-to-sequence model research.
- Responsible AI lead for the ACG team and a member of the Responsible AI working group.

POSTDOCTORAL RESEARCHER | Technical University of Darmstadt

2019 - 2022 | Darmstadt, Germany

- Lead work in metaphor generation systems with internal and external colleagues yielding state-of-the-art results.
- Innovated novel methods using linguistic expertise for novel dataset creation for figurative language.
- Developed research in social media during crises, defining foundational research into crowd-sourcing NLP data.
- Instructor for advanced seminar on Responsible AI focusing on ethics, positive impacts, and public policy.

RESEARCH ASSISTANT | UNIVERSITY OF COLORADO, BOULDER

2013-2019 | Boulder, CO

- Metaphor detection, lexical resources, and computational social science, focusing on positive impacts of NLP.
- Collaborated with social scientists on new methodology and software for understanding social media responses in crises.

SUMMARY OF QUALIFICATIONS

- NLP and machine learning expertise: language models, generation, deep learning, annotation.
- Publications at top NLP venues including ACL, EMNLP, EACL, COLING, and CoNLL.
- Software development in Python/Java for data analysis, model development and training, and deep learning
- NLP and deep learning tools: HuggingFace, PyTorch, Tensorflow, OpenAI, ScikitLearn, NLTK, Spacy
- Generative AI ranging from sequence-to-sequence models to modern LLM fine-tuning/prompt engineering
- Responsible AI: responsible data collection, fairness/bias detection and classification, harm mitigation.
- Joint PhD. in Linguistics and Computer Science, focusing on machine learning and computational linguistics.

EDUCATION

PHD. - LINGUISTICS AND COMPUTER SCIENCE | UNIVERSITY OF COLORADO MASTER OF ARTS - COMPUTATIONAL LINGUISTICS | INDIANA UNIVERSITY BACHELOR OF ARTS - LINGUISTICS | MICHIGAN STATE UNIVERSITY

SELECT PUBLICATIONS

- K. Stowe, D. Ghosh, M. Zhao; Controlled Generation for Language Learning Items. Empirical Methods in Natural Language Processing (EMNLP), Industry Track, 2023
- K. Stowe, P. Utama, I. Gurevych; IMPLI: Investigating NLI Models' Performance on Figurative Language. Association for Computational Linguistics 2022 (ACL), 2022
- K. Stowe, T. Chakrabarty, N. Peng, S. Muresan, I. Gurevych; Metaphor Generation with Conceptual Mappings. Association for Computational Linguistics 2021 (ACL), 2021