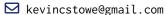
# Kevin Stowe, Ph.D.



in LinkedIn



### Introduction

I am a research scientist and natural language processing/artificial intelligence professional. My research interests include natural language generation, figurative language, linguistics-informed machine learning, and responsible AI. I have 10+ years of experience in NLP with expertise in software development, model training and deployment, data analysis, and deep learning. My previous projects include advanced LLM-prompting techniques for generating educational content, novel approaches to generating metaphors and other figurative language, and deep learning-based classification of social media data during natural disasters.

### **Employment History**

2024 - · · · ·

Research Scientist, Educational Testing Service (ETS), Princeton, NJ

2022 - 2024

#### Associate Research Scientist

- Automated Content Generation (ACG) team: building natural language generation methods for thousands of items over dozens of item types for testing/educational applications.
- Implement and explore state-of-the-art LLM methodology, focusing on high-quality evaluation, self-correcting prompting strategies, and agent-based methodology.
- Fairness, bias, and accessibility project leader, exploring socio-technical solutions for responsible generation of educational content.
- Develop and implement research and infrastructure roadmaps for generative AI team, incorporating responsible AI and state-of-the-art natural language generation and evaluation research.
- Member of the Responsible AI working group.

2019 - 2022

- Postdoctoral Researcher, Ubiquitous Knowledge Processing (UKP), Technical University of Darmstadt, Darmstadt, Germany Lead research in metaphor generation, dataset creation for figurative language inferences, and more, yielding top-tier conference publications.
  - Developed research in social media during crises, defining foundational research into crowd-sourcing NLP data.
  - Instructor for a graduate seminar on Responsible AI focusing on the ethical use of AI, positive societal impacts, and public policy.

2013 - 2019

- **Research Assistant**, University of Colorado, Boulder, CO
  - NLP expert for the Empowering the Public with Information in Crisis (EPIC) group, focusing on developing positive impacts of NLP for natural and man-made hazards.
  - Research in lexical resources, figurative language, named entity recognition, and computational social science.

#### **Education**

2013 - 2019

**■** Ph.D., University of Colorado

Joint Degree in Linguistics and Computer Science

Thesis: Syntactic and semantic improvements to computational metaphor processing

## **Education (continued)**

2009 – 2011 Master of Arts, Indiana University

Computational Linguistics Track

2004 – 2009 **Bachelor of Arts, Michigan State University** 

Linguistics

### **Skills**

Programming Python, Java, R, PHP, Javascript, SQL

Toolkits HuggingFace, PyTorch/Tensorflow, OpenAI, ScikitLearn, NLTK, Spacy, Gensim

Misc. Scientific research, writing, and presentation; client communications, team/project leadership, interdisciplinary collaboration

Languages Native English, fluent German, beginner Russian

### **Select Publications**

- Stowe, K. et al. Identifying Fairness Issues in Automatically Generated Testing Content. 19th Workshop on Innovative Use of NLP for Building Educational Applications. eprint: 2404.15104 (cs.CL).

  Phttps://arxiv.org/abs/2404.15104 (2024).
- Pramanick, A., Beck, T., Stowe, K. & Gurevych, I. The challenges of temporal alignment on Twitter during crises. Findings of Empirical Methods in Natural Language Processing (EMNLP), 2658–2672.

  Phttps://aclanthology.org/2022.findings-emnlp.195 (Dec. 2022).
- Stowe, K., Ghosh, D. & Zhao, M. Controlled Language Generation for Language Learning Items. Proceedings of the 2022 Conference on Empirical Methods in Natural Language Processing (EMNLP): Industry Track (eds Li, Y. & Lazaridou, A.) 294–305.

  Phttps://aclanthology.org/2022.emnlp-industry.30 (Dec. 2022).
- Stowe, K., Utama, P. & Gurevych, I. IMPLI: Investigating NLI Models' Performance on Figurative Language. *Proceedings of the Association for Computational Linguistics (ACL)*, 5375–5388.

  Phttps://aclanthology.org/2022.acl-long.369 (May 2022).
- Stowe, K., Chakrabarty, T., Peng, N., Muresan, S. & Gurevych, I. Metaphor Generation with Conceptual Mappings. *Proceedings of the Association for Computational Linguistics (ACL)*, 6724–6736.

  \*Ohttps://aclanthology.org/2021.acl-long.524 (Aug. 2021).