

# ADAM WIEMERSLAGE

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## EDUCATION

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### University of Colorado Boulder

PhD, Computer Science

01/2021 - 12/2024 *expected*

MS, Computational Linguistics

08/2016 - 05/2018

### Illinois State University

BA, English – Linguistics, Spanish Minor

08/2009 - 05/2013

Honors Program Scholar; Study abroad: University of Hong Kong

## PROFESSIONAL EXPERIENCE

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### Machine Learning Scientist Intern, Apple. Cupertino, CA

06/2024 - 09/2024

- Machine Learning and NLP Research on the Health team.

### Instructor, University of Colorado Boulder. Boulder, CO

01/2024 - 05/2024

- **Natural Language Processing**
- **Duties** include giving lectures and hosting office hours, managing course staff, as well as creating quizzes and rubrics.

### Teaching Assistant, University of Colorado Boulder. Boulder, CO

01/2021 - 05/2023

- **Courses:** Algorithms, Data Science and Machine Learning, Software Development Methods and Tools, Graduate Natural Language Processing, Introduction to Artificial Intelligence
- **Duties** include preparing notes and leading a weekly recitation; guest lecturing; preparing homework and exam problems; grading; office hours; handling student communications

### AI Labs Intern, Educational Testing Service (ETS). Princeton, NJ

06/2022 - 05/2023

- Research in argument mining and argument generation on the content generation team
- Combined language models and information retrieval to generate arguments backed by evidence from the news.

### Research Scientist, Pearson. Boulder, CO

10/2019 - 01/2021

- Research and development of automatic essay feedback for higher education.
- Development of new evaluation metrics for machine learning models.
- Research and development of NLP-powered ESL learning tools.

### Senior Computational Linguist, US Army Research Laboratory. Adelphi, MD 11/2018 - 10/2019

- Research and development for machine translation, computational morphology, and automatic speech recognition.
- Software engineering in C++ and Python.

### Senior Engineer, Avhana Health. Baltimore, MD

09/2018 - 11/2018

- Back-end development in Ruby on Rails and Java.

### Software Engineer, Freelance. Chicago, IL

06/2015 - 01/2017

- Web application development for small businesses.

**Staff Consultant**, Oracle USA (BigMachine acquisition). Chicago, IL

06/2013 - 06/2015

- Design, implement, and test sales automation technology.

## PUBLICATIONS

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**Adam Wiemerslage**, Travis Bartley, Katharina von der Wense, and Kyle Gorman. **Yoyodyne: A Python Library for Character-level Sequence-to-Sequence Task**. Under Review

**Adam Wiemerslage**, Kyle Gorman, and Katharina Kann. **Quantifying the Hyperparameter Sensitivity of Neural Networks for Character-level Sequence-to-Sequence Tasks**. In *18th Conference of the European Chapter of the Association for Computational Linguistics*, 2024

**Adam Wiemerslage**, Changbing Yang, Garrett Nicolai, Miikka Silfverberg, and Katharina Kann. **An Investigation of Noise in Morphological Inflection**. In *Findings of the Association for Computational Linguistics: ACL 2023*, pages 3351–3365, Toronto, Canada, July 2023. Association for Computational Linguistics

**Adam Wiemerslage**, Shiran Dudy, and Katharina Kann. **A Comprehensive Comparison of Neural Networks as Cognitive Models of Inflection**. In *Proceedings of the 2022 Conference on Empirical Methods in Natural Language Processing*, pages 1933–1945, Abu Dhabi, United Arab Emirates, December 2022. Association for Computational Linguistics

Abteen Ebrahimi, Manuel Mager, **Adam Wiemerslage**, Pavel Denisov, Arturo Oncevay, Danni Liu, Sai Koneru, Enes Yavuz Ugan, Zhaolin Li, Jan Niehues, Monica Romero, Ivan G Torre, Tanel Alumäe, Jiaming Kong, Sergey Polezhaev, Yury Belousov, Wei-Rui Chen, Peter Sullivan, Ife Adenigba, Bashar Talafha, Alcides Alcoba Inciarte, Muhammad Abdul-Mageed, Luis Chiruzzo, Rolando Coto-Solano, Hilaria Cruz, Sofia Flores-Solórzano, Aldo Andrés Álvarez López, Ivan Meza-Ruiz, John E. Ortega, Alexis Palmer, Rodolfo Joel Zevallos Salazar, Kristine Stenzel, Thang Vu, and Katharina Kann. **Findings of the Second AmericasNLP Competition on Speech-to-Text Translation**. In Marco Ciccone, Gustavo Stolovitzky, and Jacob Albrecht, editors, *Proceedings of the NeurIPS 2022 Competitions Track*, volume 220 of *Proceedings of Machine Learning Research*, pages 217–232. PMLR, 28 Nov–09 Dec 2022

**Adam Wiemerslage**, Miikka Silfverberg, Changbing Yang, Arya McCarthy, Garrett Nicolai, Eliana Colunga, and Katharina Kann. **Morphological Processing of Low-Resource Languages: Where We Are and What’s Next**. In *Findings of the Association for Computational Linguistics: ACL 2022*, pages 988–1007, Dublin, Ireland, May 2022. Association for Computational Linguistics

**Adam Wiemerslage**, Arya D. McCarthy, Alexander Erdmann, Garrett Nicolai, Manex Agirrezabal, Miikka Silfverberg, Mans Hulden, and Katharina Kann. **Findings of the SIGMORPHON 2021 Shared Task on Unsupervised Morphological Paradigm Clustering**. In *Proceedings of the 18th SIGMORPHON Workshop on Computational Research in Phonetics, Phonology, and Morphology*, pages 72–81, Online, August 2021. Association for Computational Linguistics

Andrew Gerlach, **Adam Wiemerslage**, and Katharina Kann. **Paradigm Clustering with Weighted Edit Distance**. In *Proceedings of the 18th SIGMORPHON Workshop on Computational Research in Phonetics, Phonology, and Morphology*, pages 107–114, Online, August 2021. Association for Computational Linguistics

Scott Hellman, William Murray, **Adam Wiemerslage**, Mark Rosenstein, Peter Foltz, Lee Becker, and Marcia Derr. **Multiple Instance Learning for Content Feedback Localization without Annotation**. In *Proceedings of the Fifteenth Workshop on Innovative Use of NLP for Building Educational Applications*, pages 30–40, Seattle, WA, USA → Online, July 2020. Association for Computational Linguistics

**Adam Wiemerslage**, Miikka Silfverberg, and Mans Hulden. **Phonological Features for Morphological Inflection**. In *Proceedings of the Fifteenth Workshop on Computational Research in Phonetics, Phonology, and Morphology*, pages 161–166, Brussels, Belgium, October 2018. Association for Computational Linguistics

Ling Liu, Ilamvazhuthy Subbiah, **Adam Wiemerslage**, Jonathan Lilley, and Sarah Moeller. **Morphological Reinflection in Context: CU Boulder’s Submission to CoNLL–SIGMORPHON 2018 Shared Task**. In *Proceedings of the CoNLL–SIGMORPHON 2018 Shared Task: Universal Morphological Reinflection*, pages 86–92, Brussels, October 2018. Association for Computational Linguistics

Miikka Silfverberg, **Adam Wiemerslage**, Ling Liu, and Lingshuang Jack Mao. **Data Augmentation for Morphological Reinflection**. In *Proceedings of the CoNLL SIGMORPHON 2017 Shared Task: Universal Morphological Reinflection*, pages 90–99, Vancouver, August 2017. Association for Computational Linguistics

## SOFTWARE

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### Yoyodyne

- Python library for training neural character transduction models conditioned on features.
- Built with pytorch and pytorch-lightning.
- I developed the initial abstraction, and implemented most of the model architectures.

## AWARDS

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<b>Outstanding Research Award</b> – \$500, University of Colorado Boulder	<i>AY 2023/2024</i>
<b>Outstanding Research Award</b> – \$500, University of Colorado Boulder	<i>AY 2023/2024</i>
<b>Conference Travel Support Award</b> – \$2500, University of Colorado Boulder	<i>AY 2023/2024</i>
<b>Google Cloud Academic Research Grant</b> – \$1000, Google	<i>Summer 2024</i>

- GPU credits for experiments comparing neural architectures on character-level tasks.

## SERVICE

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I have served on the program committee as a reviewer for multiple workshops and conferences

- AmericasNLP 2021, 2022, 2023, 2024
- ACL Rolling Review 2021, 2022, 2023, 2024
- ACL 2022, 2024
- EMNLP 2023, 2024
- SIGMORPHON 2022, 2023, 2024
- AAI 2023

## SKILLS

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**Programming Languages and Frameworks** Python, C++, Ruby, HTML/CSS/JavaScript, Pytorch, Dynet, Numpy, HuggingFace, Kaldi, Scikit-learn, Scipy, Pandas, Django, Ruby on Rails, Docker