# Caleb Ziems

## Curriculum Vitae

I work on socially intelligent and equitable NLP systems that are aware of social norms and robust to language variation

#### Education

2023-Present **Stanford University**, Ph.D. in Computer Science.

Advisor: Diyi Yang

2020–2023 **Georgia Institute of Technology**, M.S. in Computer Science (Ph.D. track).

Advisor: Diyi Yang

2016–2020 **Emory University**, B.S. in Computer Science (highest honors), B.A. in Mathematics.

Advisor: Ymir Vigfusson

## Pre-prints

2024 **Ziems, C.**,\* Yang, D.,\* Held, W.,\* Shaikh, O.,\* Bernstein, M.S., Mitchell, J. (2024). *Social Skill Training with Large Language Models*. Under Review. PDF

2024 Shi, W., Li, R., Zhang, Y., Ziems, C., Yu, C., Horesh, R., Abreu de Paula, R., Yang, D. (2024). CultureBank: An Online Community-Driven Knowledge Base Towards Culturally Aware Language Technologies. Under Review. PDF

#### **Publications**

2024 Ziems, C., Held, W., Dwivedi-Yu, J., & Yang, D. (2024). Measuring and Addressing

**ACL** Indexical Bias in Information Retrieval. In Proceedings of the 61st Annual Meeting of

Findings the Association for Computational Linguistics. Findings.

2024 Li, M., Shi, W., Ziems, C., & Yang, D. (2024). Social Intelligence Data Infrastructure:

**ACL** Structuring the Present and Navigating the Future. In Proceedings of the 61st Annual Findings Meeting of the Association for Computational Linguistics. Findings.

PDF

2024 Kruk, J., Marchini, M., Magu, R., Ziems, C., Muchlinski, D., Ziems, C., & Yang, D.

ACL (2024). Silent Signals, Loud Impact: LLMs for Word-Sense Disambiguation of Coded Dog Whistles. In Proceedings of the 61st Annual Meeting of the Association for Computational Linguistics.

PDF

2024 Ziems, C., Held, W., Shaikh, O., Chen, J., Zhang, Z., & Yang, D. (2023). Can Large

**CL** Language Models Transform Computational Social Science? In Computational Linguistics, 49(4).

Included in the curriculum at Darthmouth, GaTech, Purdue, UTAustin, UToronto, UVA. PDF

- 2023 Kruk, J., **Ziems, C.**, & Yang, D. (2023). *Impressions: Visual Semiotics and Aesthetic* **EMNLP**Impact Understanding. In Proceedings of the 2023 Conference on Empirical Methods in Natural Language Processing.

  PDF
- 2023 Li, E., Shi, T., **Ziems, C.**, Kan, M., Chen, N., Liu, Z., & Yang, D. (2023). *CoAn-* **EMNLP**notating: Uncertainty-Guided Work Allocation between Human and Large Language
  Models for Data Annotation. In Proceedings of the 2023 Conference on Empirical Methods in Natural Language Processing.

  PDF
- 2023 Ziems, C.,\* Held, W.,\* Yang, J., & Yang, D. (2023). Multi-VALUE: A Framework ACL for Cross-Dialectal English NLP. In Proceedings of the 61st Annual Meeting of the Association for Computational Linguistics.
  PDF
- Ziems, C., Dwivedi-Yu, J., Wang, Y., Halevy, A. Y., & Yang, D. (2023). NormBank:
   ACL A Knowledge Bank of Situational Social Norms. In Proceedings of the 61st
   Accept. Rate Annual Meeting of the Association for Computational Linguistics.
  - 2023 **Ziems, C.**,\* Shaikh, O.,\* Held, W., Pariani, A. J., Morstatter, F., & Yang, D. (2023). **ACL** *Modeling Cross-Cultural Pragmatic Inference with Codenames Duet*. In Proceedings of the 61st Annual Meeting of the Association for Computational Linguistics: Findings. PDF
  - 2023 Held, W., **Ziems, C.**, & Yang, D. (2023). *TADA: Task-Agnostic Dialect Adapters for ACL English*. In Proceedings of the 61st Annual Meeting of the Association for Computational Linguistics: Findings.

    PDF
- Ziems, C., Chen, J., Harris, C., Anderson, A., & Yang, D. (2022). VALUE: Understanding Dialect Disparity in NLU. In Proceedings of the 60th Annual Meeting of the Association for Computational Linguistics and the 12th International Joint Conference on Natural Language Processing.
- Ziems, C., Yu, J. A., Wang, Y., Halevy, A. Y., & Yang, D. (2022). The Moral Integrity Corpus: A Benchmark for Ethical Dialogue Systems. In Proceedings of the 60th Annual Meeting of the Association for Computational Linguistics and the 12th International Joint Conference on Natural Language Processing.
- Ziems, C.,\* Li, M.,\* Zhang, A., & Yang, D. (2022). *Inducing Positive Perspectives*ACL with Text Reframing. In Proceedings of the 60th Annual Meeting of the Association
  for Computational Linguistics and the 12th International Joint Conference on Natural Language Processing.

Outstanding Paper Award (Top .8%). PDF

Ziems, C.,\* ElSherief, M.,\* Muchlinski, D., Anupindi, V., Seybolt, J., De Choudhury,
 EMNLP M., & Yang, D. (2021). Latent Hatred: A Benchmark for Understanding Implicit
 Hate Speech. In Proceedings of the 2021 Conference on Empirical Methods in Natural Language Processing.

**PDF** 

2021 **Ziems, C**., Yang, D. (2021). *To Protect and To Serve? Analyzing Entity-Centric* **EMNLP** *Framing of Police Violence*. In Proceedings of the 2021 Conference on Empirical Findings Methods in Natural Language Processing: Findings.

Included in the curriculum at Stanford.

**PDF** 

2021 He, B., **Ziems, C.**, Soni, S., Ramakrishnan, N., Yang, D., & Kumar, S. (2021). *Racism* **ASONAM** is a Virus: Anti-Asian Hate and Counterhate in Social Media during the COVID-19

22% Accept. Rate Crisis. In 2021 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining. IEEE.

Included in the curriculum at CMU, GaTech, Stanford, and Tüebingen.

**PDF** 

2020 Ziems, C., Vigfusson, Y., & Morstatter, F. (2020) Aggressive, Repetitive, Intentional, ICWSM Visible, and Imbalanced: Refining Representations for Cyberbullying Classification. In Proceedings of the 14th International AAAI Conference on Web and Social Media.

Honorable Mention for Best Paper Award (Top 11%).

**PDF** 

### Experience

Sept 2023 - **Stanford NLP Group**, *Graduate Research Assistant*.

Present Advisor: Diyi Yang

May 2022 - Meta Al Integrity, Research Intern.

August 2022 Manager: Alon Halevy

Peers: Jane Yu, Yi-Chia Wang

May 2021 - **Meta Al Integrity**, Research Intern.

Sep 2021 Manager: Alon Halevy

Peers: Jane Yu, Yi-Chia Wang

August 2020 - Georgia Tech SALT Lab, Graduate Research Assistant.

August 2023 Advisor: Diyi Yang

March 2020 - Georgia Tech CLAWS Research Group, Undergraduate Research Assistant.

May 2020 Advisor: Srijan Kumar

August 2019 - **Emory SimBioSys Lab**, *Undergraduate Research Assistant*.

March 2020 Advisor: Ymir Vigfusson

June 2019 - USC/ISI MINDS Research Group, NSF REU Fellow.

August 2019 Advisor: Fred Morstatter

June 2018 - **Stanford InfoLab**, NSF REU Fellow.

August 2018 Advisor: Srijan Kumar PI: Jure Leskovec

August 2017 - Emory Concept Mining Lab, Undergraduate Research Assistant.

May 2018 Advisor: Phillip Wolff

## Teaching

- January 2024 Stanford CS 224N NLP with Deep Learning, Teaching Assistant.
- March 2024 Pretested homework assignments
  - Graded homework assignments and project reports (∼520 students)
  - Held weekly office hours
- January 2022 Georgia Tech CS 6471 Computational Social Science, Teaching Assistant.

  - May 2022 Co-designed the CS 6471 curriculum
    - Co-designed the course schedule of assigned readings
    - Co-designed project report and presentation rubrics
    - Designed quizzes and bi-weekly reading response questions
    - Graded reports and presentations
    - Held weekly office hours
- August 2017 Emory MATH 111, 112 Calculus, EPASS Peer Tutor.
  - May 2018 Worked one-on-one with 10 to 20 different undergraduates each semester
    - Explained Calculus I and II concepts, designed problem sets, and offered individual feedback

## Mentoring

- Spring 2024 **Yicheng Fu**, Stanford University (M.S.)
- Spring 2024 William Z. Li, Stanford University (B.S., M.S.)

Topic: Social Skill Training

- Fall 2023 Vyoma Raman, Stanford University (M.S.)
  - Present Topic: Power Dynamics in NLP
- Fall 2023 **Seonghee Lee**, Stanford University (M.S.)
  - Present Topic: LLM Agent Consistency
- Summer 2023 **Chijioke Mgbahurike**, *Stanford University* (B.S.)

Topic: Dialectal Bias in ASR Systems

Result: One presentation at the INSPiRE Research Poster Session.

- Fall 2022 Julia Kruk, Georgia Institute of Technology (M.S.)
  - Present Topic: Computational Aesthetics and Photojournalism

Results: One EMNLP 2023 Paper; One ACL 2024 Paper.

- Spring 2021 Minzhi (Ella) Li, National University of Singapore (B.S., Ph.D)
  - Present *Topic:* Positive Reframing; Human-LLM Co-Annotation

Results: One ACL 2022 Outstanding Paper; One EMNLP 2023 Paper; One ACL 2024 Paper.

- Spring 2021 **Anthony Zhang**, Georgia Institute of Technology (B.S.)
  - Fall 2021 Topic: Positive Reframing

Results: One ACL 2022 Outstanding Paper

- Spring 2022 **Aryan Pariani**, Georgia Institute of Technology (B.S.)
- Spring 2023 Topic: Pragmatic Reasoning in Language Games

Results: One ACL 2023 Findings Paper.

- Fall 2021 Taiwei Shi, Georgia Institute of Technology (B.S.)
- Spring 2022; Topics: Dialect-Aware NLP; Human-LLM Co-Annotation
- Summer 2023 Results: Undergraduate Thesis; One EMNLP 2023 Paper.

#### Awards and Honors

- May 2023 Magic Grant, The Brown Institute for Media Innovation.
- May 2022 **Outstanding Paper**, ACL 2022.
- March 2021 NSF Graduate Research Fellowship, National Science Foundation.
  - June 2020 Honorable Mention for Best Paper, ICWSM 2020.
  - May 2020 Summa Cum Laude, Emory University Computer Science Department.
  - May 2020 Academic Excellence Award, Emory University Computer Science Department.
  - November Phi Beta Kappa, Emory University.
    - 2018 Elected as a Junior
- August 2017 Dean's Achievement Scholarship, Emory University.

\$30,000 scholarship recognizing academic achievement, leadership, and community involvement

#### Service

- Reviewing ACL / ARR Review (2024, 2023, 2022, 2021);
  - **ACM CSCW (2021)**
- Volunteer ACL (2023); EMNLP (2021)

#### Talks and Miscellanea

- April 15, 2024 **Guest Lecturer** for CS 6501 Natural Language Processing at UVA. *Talk:* Can Large Language Models Transform Computational Social Science?
  - March 19, **Guest Lecturer** for LIN 393 Social Applications and Impact of NLP at UT Austin.
    - 2024 Talk: Can Large Language Models Transform Computational Social Science?
  - October 9, Speaker at the AWS Responsible Al Group.
    - 2023 Talk: Multi-VALUE: A Framework for Cross-Dialectal English NLP
- June 19, 2023 **Speaker** at the Summer Institutes in Computational Social Science (SICSS). *Talk:* Can Large Language Models Transform Computational Social Science?
  - October 4, Panel Member for CS 7001 Introduction to Graduate Studies at Georgia Tech.
    - 2022 Topic: National Fellowships
  - February 24, Student Host for Yian Yin, Faculty Candidate in the School of Interactive Computing
    - 2022 Topic: Science of Science and Network Science
  - February 14, Speaker at IST-Unbabel Seminar
    - 2022 Talk: Social NLP for Positive and Civil Interactions
- November 17, Guest Lecturer for CS 4650 Natural Language Processing at Georgia Tech
  - 2021 Topic: Dialect-Aware NLP + Computational Social Science
  - October 5, Panel Member for CS 7001 Introduction to Graduate Studies at Georgia Tech.
    - 2021 Topic: National Fellowships