

Haopeng Zhang

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Website
Google Scholar

RESEARCH INTERESTS

- **Natural Language Processing**
Summarization, generation, low-resource languages
- **Generative AI**
Large language models, multimodal foundation models
- **NLP4Science**
Cognitive science, healthcare

ACADEMIC EMPLOYMENT

University of Hawaii at Manoa (R1) Aug. 2024 - Present
Tenure-track Assistant Professor in Information and Computer Sciences Department
Director of Advanced Language Processing and Human Analytics (ALOHA) Lab

EDUCATION

University of California, Davis Jun. 2024
Ph.D. in Computer Science
Thesis: Building Intelligent and Reliable Summarization Systems
Advisor: Dr. Jiawei Zhang

Georgia Institute of Technology Dec. 2018
M.S. in Computational Science and Engineering
M.S. in Electrical and Computer Engineering

University of Illinois Urbana-Champaign May 2016
B.E. in Electrical Engineering

INDUSTRY EXPERIENCE

Amazon Web Services (AWS) AI Lab Santa Clara, CA
Applied Scientist Intern (Mentors: Dr. Lan Liu, Dr. Peng Qi, Dr. Zhiheng Huang) Summer 2023

Megagon Labs Mountain View, CA
Research Intern (Mentor: Dr. Hayate Iso) Spring 2023

Tencent AI Lab Seattle, WA
Research Intern (Mentors: Dr. Kaiqiang Song, Dr. Yu Dong) Summer 2022

Salesforce Research Remote
Research Intern (Mentors: Dr. Semih Yavuz, Dr. Yingbo Zhou) Summer 2021

SCHOLARSHIPS AND AWARDS

- **UH Manoa Faculty Research Travel Fund** 2025
 - \$2,000
- **Co-PI, NSF Division of Information & Intelligent Systems (IIS)** 2024 - 2028
 - SCH: Personalized Machine Learning for Repeat Adverse Health Events using Novel Multimodal Self-Supervised Pretraining Methods
 - Personal share: \$ 450K/1.2M
- **OpenAI's Researcher Access Program** 2025
 - Computing Credits: \$7,500
- **Google Cloud Research Credits Program** 2024 - 2025
 - Computing Credits: \$5,000
- **NSF ACCESS Allocations Program** 2024
- **UC Davis Graduate Group in Computer Science (GGCS) Research Fellowship** 2023
 - \$15,000
- **FSU Travel Award** 2020
- **FSU Adelaide D. Wilson Graduate Fellowship** 2019
- **UIUC Russell E. Berthold Scholarship** 2015

TEACHING EXPERIENCE

denotes graduate-level courses.

- **Instructor@UH Manoa**
 - ICS 691# - NLP and LLM Fall 2025
 - ICS 435 - Machine Learning Fundamentals Spring 2025
 - ICS 635# - Machine Learning Spring 2025
 - ICS 661# - Advanced Artificial Intelligence Fall 2024
- **Teaching Assistant@UC Davis**
 - ECS189G - Deep Learning Winter 2022
- **Teaching Assistant@FSU**
 - COP 5725# - Advanced Database Systems Fall 2021, Spring 2021
 - COP 4531 - Complexity and Analysis of Data Structures and Algorithms Spring 2020
 - COP 4710 - Theory and Structure of Databases Fall 2020, Fall 2019
- **Teaching Assistant@Georgia Tech**
 - ECE 3450 - Semiconductor Devices Fall 2017, Spring 2017

MENTORSHIP

* denotes Ph.D. students supervised by me.

- **Cade Kane***
 - Current: Ph.D. student, UH Manoa
 - Research Topic: Hawaiian NLP

- **Haohan Yuan***
Current: Ph.D. student, UH Manoa
Research Topic: Information Extraction
Collaborated Papers: [3],[4]
- **Zizhong Li**
Current: Ph.D. student, UC Davis
Research Topic: Information Retrieval
Collaborated Papers: [5], [2], [18]
- **Xiao Liu**
Current: Ph.D. student, UC Davis
Research Topic: Summarization
Collaborated Papers: [7], [8], [10], [11], [12]

CONFERENCE

- [1] B. Konh, M. Kamrava, R. Imanaka, and **H. Zhang**, “Haptic simulation workstation for prostate brachytherapy training”, in *ABS 2025 Annual Conference (oral)*, 2025.
- [2] Z. Li, **H. Zhang**, and J. Zhang, “Intermediate distillation: Data-efficient distillation from black-box llms for information retrieval”, in *International Joint Conference on Neural Networks (IJCNN 2025)*, 2025.
- [3] H. Yuan*, S. C. Hui, and **H. Zhang**, “A structure-aware generative model for biomedical event extraction”, in *30th International Conference on Database Systems for Advanced Applications (DASFAA 2025)*, 2025.
- [4] H. Yuan* and **H. Zhang**, “Domainsum: A hierarchical benchmark for fine-grained domain shift in abstractive text summarization”, in *Findings of the Association for Computational Linguistics: (NAACL 2025)*, 2025.
- [5] Z. Li, **H. Zhang**, and J. Zhang, “Unveiling the magic: Investigating attention distillation in retrieval-augmented generation”, in *2024 Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL 2024)*, 2024.
- [6] **H. Zhang**, H. Iso, S. Gurajada, and N. Bhutani, “Xatu: A fine-grained instruction-based benchmark for explainable text updates”, in *The 2024 Joint International Conference on Computational Linguistics, Language Resources and Evaluation (LREC-COLING 2024)*, 2024.
- [7] **H. Zhang**, X. Liu, and J. Zhang, “Summit: Iterative text summarization via chatgpt”, in *Findings of the 2023 Conference on Empirical Methods in Natural Language Processing (EMNLP 2023)*, Singapore: Association for Computational Linguistics, 2023.
- [8] **H. Zhang**, X. Liu, and J. Zhang, “Extractive summarization via chatgpt for faithful summary generation”, in *Findings of the 2023 Conference on Empirical Methods in Natural Language Processing (EMNLP 2023)*, Singapore: Association for Computational Linguistics, 2023.
- [9] **H. Zhang**, S. Cho, K. Song, X. Wang, J. Zhang, and Y. Dong, “Unsupervised multi-document summarization with holistic inference”, *The 13th International Joint Conference on Natural Language Processing and the 3rd Conference of the Asia-Pacific Chapter of the Association for Computational Linguistics (IJCNLP-AAACL 2023)*, 2023.
- [10] **H. Zhang**, X. Liu, and J. Zhang, “DiffuSum: Generation enhanced extractive summarization with diffusion”, in *Findings of the Association for Computational Linguistics: (ACL 2023)*, Toronto, Canada: Association for Computational Linguistics, Jul. 2023, pp. 13 089–13 100.
- [11] **H. Zhang**, X. Liu, and J. Zhang, “Contrastive hierarchical discourse graph for scientific document summarization”, in *Proceedings of the 4th Workshop on Computational Approaches to Discourse (ACL CODI 2023)*, Toronto, Canada: Association for Computational Linguistics, Jul. 2023, pp. 37–47.

- [12] **H. Zhang**, X. Liu, and J. Zhang, “HEGEL: Hypergraph transformer for long document summarization”, in *Proceedings of the 2022 Conference on Empirical Methods in Natural Language Processing (EMNLP 2022)*, Abu Dhabi, United Arab Emirates: Association for Computational Linguistics, Dec. 2022, pp. 10 167–10 176.
- [13] **H. Zhang**, S. Yavuz, W. Kryscinski, K. Hashimoto, and Y. Zhou, “Improving the faithfulness of abstractive summarization via entity coverage control”, in *Findings of the Association for Computational Linguistics: (NAACL 2022)*, Seattle, United States: Association for Computational Linguistics, Jul. 2022, pp. 528–535.
- [14] **H. Zhang** and J. Zhang, “Text graph transformer for document classification”, in *Proceedings of the 2020 Conference on Empirical Methods in Natural Language Processing (EMNLP 2020)*, Online: Association for Computational Linguistics, Nov. 2020, pp. 8322–8327.

JOURNAL

- [15] **H. Zhang**, P. S. Yu, and J. Zhang, “A systematic survey of text summarization: From statistical methods to large language models”, *ACM Computing Surveys*, 2025.
- [16] **H. Zhang**, “Building intelligent and reliable summarization systems”, Ph.D. dissertation, University of California, Davis, 2024.

PREPRINT

- [17] **H. Zhang**, Y. Ren, H. Yuan, J. Zhang, and Y. Shen, “Wi-chat: Large language model powered wi-fi sensing”, *arXiv preprint:2502.12421*, 2025.
- [18] Z. Li, **H. Zhang**, and J. Zhang, “A revisit of fake news dataset with augmented fact-checking by chatgpt”, *arXiv preprint:2312.11870*, 2023.
- [19] J. Zhang, **H. Zhang**, L. Sun, and C. Xia, “Graph-bert: Only attention is needed for learning graph representations”, *arXiv preprint:2001.05140*, 2020.

PROFESSIONAL SERVICE

- Organizer, the 5th New Frontiers in Summarization Workshop 2025
- Member, Hawaii Data Science Institute 2024 - Present
- Affiliate Member, University of Hawaii Cancer Center (UHCC) 2025 - Present
- Member, Hawaii EPSCoR Change Hawaii (HI) 2024 - Present
- Graduate Studies Committee Member, UH Manoa 2024 - Present
- CIS program Data Science committee Member, UH Manoa 2024 - Present
- Panelist, NSF CISE Program 2024, 2025
- **Area Chair**
ACL 25, ACL Rolling Review 25, AMCIS 25
- **Journal Reviewer**
IEEE/ACM Transactions on Audio, Speech, and Language Processing
IEEE Transactions on Big Data
ACM Transactions on Embedded Computing Systems
Artificial Intelligence Review

Computer Speech & Language
PeerJ Computer Science
Frontiers in Artificial Intelligence
Engineering Applications of Artificial Intelligence

- **Conference Reviewer & Program Committee Member**

SDM 24, EMNLP 23/24, IJCNN 23/24, ACL 23/24, EACL 23, KDD 23/24, AAAI 21/22, NewSumm 23, NAACL 24/25, CODI 24, ACL Rolling Review 23/24, ICPR 24