

HITA KAMBHAMETTU

<https://hita-k.github.io/>

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EDUCATION

University of Pennsylvania

August 2022 - Present

PhD in Computer Science

Advisors: Andrew Head, Kevin Johnson

Selected Coursework: Machine Learning, Natural Language Processing

Carnegie Mellon University

August 2018 - May 2022

B.S. in Information Systems

Minors in Computer Science, Machine Learning

Selected Coursework: Deep Learning, Computer Vision, Cognitive Robotics, Information and Grid Design, Building User-Focused Sensor Systems

RESEARCH INTERESTS

My work is focused on human-AI interaction and healthcare informatics. I develop interaction mechanisms and leverage natural language processing techniques to build tools that empower non-expert users develop a nuanced understanding of complex, inaccessible information. I am currently developing a system that leverages large language models and scientific claim verification to cluster evidence sources and generate answers for complex medical queries, allowing users to interact directly with the evidence for deeper insight and verification.

Research Areas: Human-AI Interaction, Healthcare Informatics, Scholarly Communication, Explainable AI

RESEARCH EXPERIENCE

Penn Human Computer Interaction Lab (UPenn)

September 2022 - Present

Advisors: Andrew Head and Kevin Johnson

- **Research Focus:** Building intelligent sensemaking interfaces to make complex information more accessible to non-experts.
- **Ongoing Work:** Developing an overview interface to help non-experts review several pieces of evidence complementing medical claims
- **Relevant Past Work:**
 - Designed an interface to augment complex source texts to support critical examination of attributed AI-generated summaries and the source texts they were derived from
 - Conducted an in-depth qualitative study to develop patient-driven guidelines for enhancing intelligent interfaces for medical progress notes
 - Developed a chatbot system for providing information about genetic risk, leveraging large language models and a qualitative analysis of genetic counseling sessions

- **Research Focus:** Leveraging deep learning techniques to investigate the behavior of fuzzer-generated code

- **Research Focus:** Investigating how programming systems can support how end users naturally express robot programs

PUBLICATIONS

Hita Kambhamettu, Jamie Flores, Andrew Head. “Traceable Text: Enhancing Understanding of AI-Generated Summaries through Source-Linked Interactions.” *under review*.

Aviv Landau, **Hita Kambhamettu**, Anthonia Odartei, Sonya Sanders, Andrew Head, Kenrick Cato. “Interdisciplinary and Community Collaboration in Reimagining Electronic Health Records for Childhood Asthma.” *under review*.

Hita Kambhamettu*, Yidi Huang*, Kevin Johnson, Angela Bradbury. “Will Patients Accept Generative AI Genetic Counseling?” American Medical Informatics Association (AMIA) Annual Symposium 2024.

Hita Kambhamettu, Danaë Metaxa, Kevin Johnson, Andrew Head. “Explainable Notes: Examining How to Unlock Meaning in Medical Notes with Interactivity and Artificial Intelligence.” ACM Conference on Human Factors in Computing Systems (CHI) 2024.

Hita Kambhamettu*, Yidi Huang*, Kevin Johnson, Angela Bradbury. “Knowledge-Grounded Medical Dialogue Generation for Genetic Counseling Regarding Alzheimer’s Risk.” Workshop on Health Intelligence (co-located with AAAI) 2024.

Zhiyuan Wu, Jiening Li, Kevin Ma, **Hita Kambhamettu**, Andrew Head. “FFL: A Language and Live Runtime for Styling and Labeling Typeset Math Formulas.” ACM Symposium on User Interface Software and Technology (UIST) 2023.

Raymond Fok, **Hita Kambhamettu**, Luca Soldaini, Jonathan Bragg, Kyle Lo, Marti A. Hearst, Andrew Head, Daniel S. Weld. “Scim: Intelligent Skimming Support for Scientific Papers.” ACM Conference on Intelligent User Interfaces (IUI) 2023.

Hita Kambhamettu, John Billos, Carolyn Oluw Oluwaseun-Apo, Rohan Padhye, Vincent Hellendoorn “On the Naturalness of Fuzzer-Generated Code.” Proceedings of the 19th International Conference on Mining Software Repositories (MSR) 2022.

Hita Kambhamettu, Michael Jae-Yoon Chung, Vinitha Ranganeni, Patrícia Alves-Oliviera “Collecting Insights about How Novice Programmers Naturally Express Programs for Robots.” Workshop on the intersection of HCI and PL (PLATEAU) 2022.

Yunzhi Li, **Hita Kambhamettu**, Yidan Hu, Rui Zhang “ImPos: An Image-Based Indoor Positioning System.” IEEE Annual Consumer Communications & Networking Conference (CCNC) 2022.

Hita Kambhamettu “A Vision-Based Method for Non-Invasive Respiration Rate Monitoring.” IEEE Applied Imagery Pattern Recognition Workshop (AIPR) 2021.

TEACHING EXPERIENCE

University of Pennsylvania

Head Teaching Assistant

- CIS4120/CIS5120: Introduction to Human-Computer Interaction *Fall 2023*
Instructor: Danaë Metaxa

Carnegie Mellon University

Teaching Assistant

- 15-494/694: Cognitive Robotics *Spring 2022*
Instructor: David Touretzky
- 67-364: Practical Data Science *Spring 2022*
Instructor: Raja Sooriamurthi
- 17-313: Foundations of Software Engineering *Fall 2021*
Instructor: Rohan Padhye
- 15-110: Principles of Computing *Fall 2020, Spring 2021*
Instructor: Kelly Rivers

AWARDS

NSF Graduate Research Fellow	2024
NSF GRFP Honorable Mention	2022
NSF REU Scholarship	2021
Grace Hopper Research Scholar	2020

SERVICE/OUTREACH

Machine Learning for Health Organizing Committee Helped workflow in the review process for the ML4H symposium.	<i>May 2023 - August 2023</i>
AEOP Summer Apprenticeship Mentor Mentored the research of under-represented high school students.	<i>May 2023 - August 2023</i>
Penn GEMS Instructor Taught a class on conversational agents to local middle school students.	<i>May 2023 - July 2023</i>

LEADERSHIP AND MENTORSHIP

CMU Information Systems Mentor	<i>May 2023 - August 2023</i>
Penn CIS PhD Mentorship Program Organizer	<i>May 2024 - Present</i>
Penn Graduate Student Government PhD Representative	<i>September 2022 - Present</i>
CIS Office Committee Member	<i>May 2023 - May 2024</i>