HITA KAMBHAMETTU

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

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EDUCATION

University of Pennsylvania *August 2022 - Present*
PhD in Computer Science
Advisor: Andrew Head
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. I build intelligent, interactive tools that empower patients to develop a nuanced understanding of their health.

RESEARCH EXPERIENCE

Penn Human Computer Interaction Lab (UPenn) *September 2022 - Present*
Advisor: Andrew Head

- **Research Focus:** Building intelligent reading interfaces to make medical information more accessible to patients

- **Ongoing Work:** Heading a project to augment medical notes with attributed AI-generated summaries, enabling patients to trace lines of reasoning in their health records

- **Relevant Past Work:**

  - 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

  - Designed and conducted an in-lab usability study to evaluate SCIM, an intelligent reading interface for skimming scientific papers

Program Analysis, Software Testing, and Applications Lab (CMU) *June 2021 - May 2022*
Advisors: Rohan Padhye and Vincent Hellendoorn

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

Human-Centered Robotics Lab (UW) *December 2020 - May 2022*
Advisor: Maya Cakmak

- **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.*

Hita Kambhamettu, Danaë Metaxa, Kevin Johnson, Andrew Head. "Explainable Notes: Examining How to Unlock Meaning in Medical Notes with Interactivity and Artifical 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, Patricía 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

SERVICE/OUTREACH

CIS Office Committee Member *May 2023 - Present*
Coordinate office assignments for CIS Ph.D. students and postdocs.

AEOP Summer Apprenticeship Mentor *May 2023 - August 2023*
Mentored the research of a high school apprentice.

Penn GEMS Instructor *May 2023 - July 2023*
Taught a class on conversational agents to Philadelphia middle school students.

AWARDS

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

TECHNICAL SKILLS

Programming Languages Javascript, HTML/CSS, Python, Coq
Tools LaTeX, Pytorch, Git