Alexander Martin

amart233@jhu.edu • GitHub • Scholar • LinkedIn • Website

EDUCATION

Johns Hopkins University — **Baltimore, Maryland**
Ph.D. in Computer Science — Expected May 2029
Advisor: Dr. Benjamin Van Durme

University of Rochester — **Rochester, New York**
B.S. in Computer Science; Highest Honors in Research — May 2024
Advisor: Dr. Aaron Steven White, Dr. Jiebo Luo
Thesis: Human-Centric Event Representations at the Document Level and Beyond

RESEARCH

Human Language Technology Center of Excellence — Summer 2024
Researcher Intern; Advised by Dr. Benjamin Van Durme
Researched extracting information about events from videos and aligned text and video retrieval.

Formal And Computational Semantics Lab — 2022 – 2024
Undergraduate Researcher; Advised by Dr. Aaron Steven White
Researched extracting and summarizing information about events from large unstructured text.

Visual Intelligence & Social Multimedia Analytics Lab — 2022 – 2024
Undergraduate Researcher; Advised by Dr. Jiebo Luo
Researched methods for understanding and extracting information from videos and methods for generating images to inform research in evolutionary biology.

Environmental Protection Agency — Summer 2022 – Fall 2022
Research Intern; Advised by Dr. Andrea Kirk
Developed methods for relative importance analysis to measure the effects of PFAS exposure on humans and their health, including cancer risk and bone mineral density.

Rochester Human Computer Interaction Lab — 2022 – 2024
Research Assistant; Advised by Dr. Ehsan Hoque
Created synthetic datasets to improve performance of hand pose estimation models for diagnosing Parkinson's Disease in virtual health appointments.

HONORS, AWARDS, & GRANTS

National Science Foundation, **Graduate Research Fellowship** — 2024 – 2029
University of Rochester, **Charles L. Newton Prize** — 2024
University of Rochester, **Senior Research Award** — 2024
University of Rochester, **Research Presentation Grant** — 2024
University of Rochester, **Dean's Award in Engineering and Mathematics** — 2024
CRA, **Outstanding Undergraduate Research Award Honorable Mention** — 2024
University of Rochester, **Research Presentation Grant** — 2023
University of Rochester, **Dean's Award in Engineering and Mathematics** — 2023
University of Rochester, **River Campus Libraries Data Set Grant** — 2023
University of Rochester, **Residential Life Best Program of the Year** — 2023
University of Rochester, **Make It Happen Grant** — 2022

PUBLICATIONS

[1] R. Kriz*, K. Sanders*, D. Etter*, K. Murray, C. Carpenter, K. Van Ochten, H. Recknor, J. Guallar-Blasco, **A. Martin**, R. Colaianni, N. King, E. Yang, B. Van Durme "MultiVENT 2.0: A Massive Multilingual Benchmark for Event-Centric Video Retrieval" (ArXiv 2024)

[2] K. Sanders*, R. Kriz*, D. Etter*, H. Recknor, **A. Martin**, C. Carpenter, J. Lin, B. Van Durme "Grounding Partially-Described Events in Multimodal Data" (EMNLP Findings, 2024)

[3] W. Gantt, **A. Martin**, P. Kuchmiichuk, A.S. White "Event-Keyed Summarization" (EMNLP Findings, 2024)
[4] S. Vashishtha, **A. Martin**, W. Gantt, B. Van Durme, A.S. White "FAMuS: Frames Across Multiple Sources" (NAACL, 2024, Poster)
[5] M. Hasan, C. Ozel, N. Long, **A. Martin**, S. Potter, T. Adnan, S. Lee, A. Zadeh, E. Hoque "Hi5: 2D Hand Pose Estimation with Zero Human Annotation" (ArXiv 2024)
[6] **A. Martin**, H. Zheng, J. An, J. Luo "Jurassic World Remake: Bringing Ancient Fossils Back to Life via Zero-Shot Long Image-to-Image Translation" (MM 2024, Oral Presentation)
[7] S. Barham, O. Weller, M. Yuan, K. Murray, M. Yarmohammadi, Z. Jiang, S. Vashishtha, **A. Martin**, A. Liu, A.S. White, J. Boyd-Graber, B. Van Durme ""MegaWika: Millions of reports and their sources across 50 diverse languages" (ArXiv, 2023)
[8] A. Kirk, A. DeStafano, **A. Martin**, K. Kirk, C. Martin "A New Interpretation of Relative Importance on An Analysis of Per and Polyfluorinated Alkyl Substances (PFAS) Exposures on Bone Mineral Density" (IJERPH 2023)

TALKS

FAMuS: Frames Across Multiple Sources *(Video, Poster)* — *June 2024*
Main Conference; NAACL 2024 — *Poster*

FAMuS: Frames Across Multiple Sources *(Slides)* — Mar. 2024
3rd Workshop on Processing and Evaluating Event Representations; PEER 2024 — *Talk*

Jurassic World Remake *(Slides)* — Oct. 2023
Main Conference; ACM Multimedia 2024 — *Talk*

TEACHING EXPERIENCE

University of Rochester

Introduction to Artificial Intelligence (CSC 242)	Spring 2023
Data Structures and Algorithms (CSC 172)	Spring 2022, Fall 2022
Introduction to Computer Science (CSC 171)	Fall 2021
Math and Computer Science Tutor	Fall 2021 – Fall 2023

PROFESSIONAL SERVICE

Reviewing
NeurIPS 2024

University of Rochester: Residential Life — **Rochester, New York**
Resident Advisor — Aug. 2021 – May 2024
Advised students living in residence halls on academics, mental health, and social conflicts.

STEM Initiative — **Rochester, New York**
Education Mentor — Jan. 2021 – Dec. 2023
Taught programming fundamentals for projects with Raspberry Pi and Lego Robotics.

SKILLS

Programming Languages: Python, Java, C++, Bash, **Familiar:** C, MATLAB, JavaScript, R
Tools: PyTorch, Hugging Face, Amazon Mechanical Turk, Docker, AWS
Soft Skills: Small group instruction, conflict resolution