

Alexander Martin

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EDUCATION

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|--|---|
| Johns Hopkins University <i>Ph.D. in Computer Science</i> <i>Advisor: Dr. Benjamin Van Durme</i> | Baltimore, Maryland Expected 2028 |
| University of Rochester <i>B.S. in Computer Science; Highest Honors in Research</i> <i>Advisor: Dr. Aaron Steven White, Dr. Jiebo Luo</i> <i>Thesis: Human-Centric Event Representations in Documents and Videos</i> | Rochester, New York May 2024 |

SELECT HONORS & AWARDS

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| National Science Foundation, Graduate Research Fellowship | 2024 – 2029 |
| Computing Research Association, Outstanding Undergraduate Research Award (HM) | 2024 |
| University of Rochester, Charles L. Newton Prize | 2024 |

INDUSTRY RESEARCH

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| Amazon, Fire TV <i>Researcher; AI2AI Award</i> Researched topics in representations for efficient multimodal retrieval and generation. | 2025 – Present |
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RESEARCH EXPERIENCE

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| Human Language Technology Center of Excellence <i>Ph.D. Researcher; Advised by Dr. Benjamin Van Durme</i> Researched topics in multimodal content generation and reasoning using documents and videos. | 2024 – Present |
| Human Language Technology Center of Excellence <i>Researcher Intern; Advised by Dr. Benjamin Van Durme</i> Researched extracting information about events from videos and aligned text and video retrieval. | Summer 2024 |
| Formal And Computational Semantics Lab <i>Undergraduate Researcher; Advised by Dr. Aaron Steven White</i> Researched extracting and summarizing information about events from large unstructured text. | 2022 – 2024 |
| Visual Intelligence & Social Multimedia Analytics Lab <i>Undergraduate Researcher; Advised by Dr. Jiebo Luo</i> Researched methods for image generation, image-to-image translation, and video understanding. | 2022 – 2024 |
| Environmental Protection Agency <i>Research Intern; Advised by Dr. Andrea Kirk</i> 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. | Summer 2022 – Fall 2022 |
| Rochester Human Computer Interaction Lab <i>Research Assistant; Advised by Dr. Ehsan Hoque</i> Created synthetic datasets to improve performance of hand pose estimation models for diagnosing Parkinson’s Disease in virtual health appointments. | 2022 – 2024 |

PUBLICATIONS

Representative Work: Multimodal RAG, Multimodal Reasoning, Video Understanding

- [1] **A. Martin**, et al. “WikiVideo: Article Generation from Multiple Videos” ([ArXiv](#) 2025)
- [2] **A. Martin**, et al. “Seeing Through the MiRAGE: Evaluating Multimodal Retrieval Augmented Generation” ([ArXiv](#) 2025)
- [3] A. Reddy*, **A. Martin***, et al. “Video-ColBERT: Contextualized Late Interaction for Text-to-Video Retrieval” ([CVPR](#) 2025)

All Others:

- [4] R. Kriz et al. (incl **A. Martin**) “MultiVENT 2.0: A Massive Multilingual Benchmark for Event-Centric Video Retrieval” ([CVPR](#) 2025)
- [5] S. Samuel et al. (incl **A. Martin**) “MMORRF: Multimodal Multilingual Modularized Reciprocal Rank Fusion” ([SIGIR](#) 2025)
- [6] D. DeGenaro et al. (incl **A. Martin**) “FORTIFY: Generative Model Fine-tuning with ORPO for ReTrieval Expansion of InFormal Noisy Text” ([ACL](#) Workshop 2025)
- [7] W. Walden, P. Kuchmiichuk, **A. Martin**, et al. “Cross-Document Event-Keyed Summarization” ([ACL](#) Workshop 2025)
- [8] K. Sanders et al. (incl **A. Martin**) “Grounding Partially-Described Events in Multimodal Data” ([EMNLP](#) 2024)
- [9] W. Gantt, **A. Martin**, et al. “Event-Keyed Summarization” ([EMNLP](#) 24)
- [10] S. Vashishtha, **A. Martin**, et al. “FAMuS: Frames Across Multiple Sources” ([NAACL](#) 2024)
- [11] M. Hasan et al. (incl **A. Martin**) “Hi5: 2D Hand Pose Estimation with Zero Human Annotation” ([ArXiv](#) 2024)
- [12] **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)
- [13] S. Barham et al. (incl **A. Martin**) “MegaWika: Millions of reports and their sources across 50 diverse languages” ([ArXiv](#) 2023)
- [14] A.B. Kirk, A. DeStefano, **A. Martin**, et al. “A New Interpretation of Relative Importance Analysis of Per and Polyfluorinated Alkyl Substances (PFAS) Exposure on Bone Mineral Density” ([IJERPH](#) 2023)

TALKS

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| Knowledge Intensive Multimodal Retrieval Augmented Generation [slides tbd] | November 2025 |
| University of Maryland, Baltimore County; PPR Seminar | Seminar |
| Discovering and Understanding Events in Videos in Real Time [slides] | October 2025 |
| MacroXStudio (macrox.ai) | Talk |
| On Demand Article Generation of Events in Real Time [slides] | April 2025 |
| University of Rochester, Department of Computer Science | Seminar |
| MARE: Automatic Modality-Agnostic Report Evaluation [slides] | April 2025 |
| Eval4Rag Workshop; European Conference on Information Retrieval | Oral |
| Understanding Events in Multimodal Data Through Question Answering [slides] | April 2025 |
| 4 th Workshop on Processing and Evaluating Event Representations | Talk |
| FAMuS: Frames Across Multiple Sources [slides] | April 2024 |
| 3 rd Workshop on Processing and Evaluating Event Representations | Talk |
| Jurassic World Remake [slides] | October 2023 |
| Main Conference; ACM Multimedia | Ora |

SERVICE

MAGMaR: Workshop on Multimodal Augmented Generation via Multimodal Retrieval

Organizing Committee; *ACL* 2026

Program Committee; *ACL* 2025

Mentorship

Charles Weng (Johns Hopkins University, B.S./M.S. 2025; **Now:** TikTok Research Scientist)

Dengjia Zhang (**current:** Johns Hopkins University, M.S. 2026)

Hanxiang Qin (**current:** Johns Hopkins University, M.S. 2026)

Katherine Guerrierio (**current:** Johns Hopkins University, B.S. 2027)

Community Service

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| North American Computational Linguistics Open Competition (NACLO) | 2024 – Present |
| Competition Organizer | |
| STEM Initiative | 2021 – 2024 |
| Education Mentor | |
| University of Rochester: Residential Life | 2021 – 2024 |
| Resident Advisor | |

Teaching

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| Introduction to Artificial Intelligence (University of Rochester) | Spring 2023 |
| Data Structures and Algorithms (University of Rochester) | Spring 2022, Fall 2022 |
| Introduction to Computer Science (University of Rochester) | Fall 2021 |

OTHER HONORS & AWARDS

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| University of Rochester, Senior Research Award | 2024 |
| University of Rochester, Research Presentation Grant (x2) | 2023, 2024 |
| University of Rochester, Dean's Award in Engineering and Mathematics (x2) | 2023, 2024 |
| University of Rochester, River Campus Libraries Dataset Grant | 2023 |
| University of Rochester, Residential Life Best Program of the Year | 2023 |
| University of Rochester, Make It Happen Grant | 2022 |