

# Alexander Martin

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## EDUCATION

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<b>Johns Hopkins University</b> <i>M.S. &amp; Ph.D. in Computer Science</i> <i>Advisor: Dr. Benjamin Van Durme</i>	<b>Baltimore, Maryland</b> Expected May 2028
<b>University of Rochester</b> <i>B.S. in Computer Science; Highest Honors in Research</i>	<b>Rochester, New York</b> May 2024

## RESEARCH

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<b>Human Language Technology Center of Excellence</b> <i>Research Intern; Advised by Dr. Benjamin Van Durme</i> <ul style="list-style-type: none"><li>• Researched extracting information about events from videos and aligned text.</li></ul>	<b>Johns Hopkins University</b> May 2024 – August 2024
<b>Formal And Computational Semantics (FACTS) Lab</b> <i>Undergraduate Researcher; Advised by Dr. Aaron Steven White</i> <ul style="list-style-type: none"><li>• Created a variety of corpora for machine learning models for document, mutli-document, and cross-document level tasks on event argument extraction and summarization of events.</li><li>• Built transformer-based models and finetuned Large Language Models (LLMs) for those tasks.</li><li>• Formulated new evaluation metrics for cross-document argument extraction.</li></ul>	<b>University of Rochester</b> May 2022 – Present
<b>Visual Intelligence &amp; Social Multimedia Analytics (VISTa) Lab</b> <i>Undergraduate Researcher; Advised by Dr. Jiebo Luo</i> <ul style="list-style-type: none"><li>• Created a dataset for long image-to-image translation, for translating fossils into living animals.</li><li>• Designed methodologies for working with Multimodal Large Language Models (LMMs), Large Video Understanding Models, Stable Diffusion, and Generative Adversarial Networks.</li><li>• Developed contrastive pretraining objectives and unsupervised generative models for media.</li></ul>	<b>University of Rochester</b> August 2022 – Present

## PUBLICATIONS & TALKS

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- W. Gantt, **A. Martin**, P. Kuchmiichuk, A.S. White “Event-Keyed Summarization” ([ArXiv](#), 2024)
- S. Vashishtha, **A. Martin**, W. Gantt, B. Van Durme, A.S. White “FAMuS: Frames Across Multiple Sources” ([NAACL](#), 2024)
- 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](#))
- S. Barham, et al. (incl **A. Martin**) “MegaWika: Millions of reports and their sources across 50 diverse languages” ([ArXiv](#), 2023)
- 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)
- Talk:** PEER Workshop 2024: *FAMuS: Frames Across Multiple Sources* (March 2024)
- Talk:** ACM Multimedia 2023: *Jurassic World Remake* (October 2023)

## HONORS, AWARDS, & GRANTS

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National Science Foundation, <b>Graduate Research Fellowship (\$37,000/yr)</b>	2024 – 2027
University of Rochester, <b>Charles L. Newton Prize (\$2,010)</b>	2024
CRA, <b>Outstanding Undergraduate Research Award Honorable Mention</b>	2024
University of Rochester, <b>Research Presentation Grant (\$1,300)</b>	2023
University of Rochester, <b>Deans’ Award in Engineering and Mathematics</b>	2023
University of Rochester, <b>River Campus Libraries Data Set Grant (\$850)</b>	2023
University of Rochester, <b>Make It Happen Grant (\$500)</b>	2022

## SKILLS

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**Programming Languages:** Python, Java, C++, MATLAB **Familiar:** C, SQL, JavaScript, R  
**Tools/Frameworks:** PyTorch, Amazon Mechanical Turk, Docker, AWS, LaTeX, Git, Overleaf