ARTEMIS PANAGOPOULOU

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EDUCATION

University of Pennsylvania, Philadelphia, PA

Doctor of Philosophy, Computer and Information Science *Aug, 2021 - Expected May, 2026*
Research Interests: Natural Language Processing, Computer Vision
Advisors: Chris Calllison-Burch, Mark Yatskar GPA: 3.97/4.

Master of Science in Engineering, Computer and Information Science *Jan, 2018 - Aug, 2020*
Thesis: *"Metaphor and Entailment: Looking at Metaphors Through the Lense of Textual Entailment"*
Advisor: Mitch Marcus GPA: 3.77/4.

Dual Degree in Artificial Intelligence *Aug, 2015 - Aug, 2020*
Bachelor of Applied Science (BAS), Computer and Cognitive Science.
Thesis: *"Best-First-Model-Merge: From Theory to Implementation and Application"*
Advisor: Mitch Marcus
Bachelors of Arts (BA) Honors, Cognitive Science
Thesis: *"Optical Flow Estimation from Event Based Cameras Using Deep Spiking Neural Networks"*
Advisor: Kostas Daniilidis
Bachelors of Arts (BA) Honors, Philosophy
Thesis: *"On the suitability of Generative Difference Making for addressing challenges in Artificial Intelligence and Robotics."*
Advisor: Lisa Miracchi
Minor in Mathematics GPA: 3.59/4.

RESEARCH EXPERIENCE

Research Intern *May, 2023 - August, 2024*
Salesforce, Palo-Alto CA

- Conducted multimodal AI research under the supervision of Dr. Juan Carlos Niebles.
- Led three projects: two involving models that combine vision, language, audio, and 3D, resulting in an ECCV publication and a NeurIPS submission; and one on Visual Programming, currently pending submission to CVPR.
- Contributed to a CVPR publication on contrastively training a model on 3D point clouds and text.

Research Assistant *May, 2019 - May, 2020*
General Robotics, Automation, and Sensing (GRASP) Lab, University of Pennsylvania

- Worked on estimating optical flow from event based cameras (supervised and unsupervised) using Spiking Neural Networks. (Supervisor: Prof. Kostas Daniilidis)

Research Assistant *May, 2019 - Aug, 2019*
*Kod*Lab, University of Pennsylvania*

- Developed a simulation for physically parameterized soft bellow-shaped robots with multiple degrees of freedom. (Supervisor: Prof. Daniel Koditschek)

AWARDS AND FUNDING

CTL Graduate Fellowship for Teaching Excellence *August, 2024*
AWS Research Funding for Fair and Trustworthy AI *May, 2023*
Alexa Taskbot Competition Finalist *February, 2022*
President's Engagement Prize *May, 2020*
Dean's List *Aug, 2017 - May, 2020*
Penn Engineering Exceptional Service Award *March, 2019*

PUBLICATIONS

- Panagopoulou, Artemis, Le Xue, Honglu Zhou, Silvio Savarese,Ran Xu, Caiming Xiong, Juan Carlos Niebles. "DisCRn: Evaluating Discriminatory Cross-Modal Reasoning in Audio, Video, Image, and 3D", Under Review NeurIPS (2024)
- Panagopoulou, Artemis, Le Xue, Ning Yu, Junnan Li, Dongxu Li, Shafiq Joty, Ran Xu, Silvio Savarese, Caiming Xiong, Juan Carlos Niebles. "X-InstructBLIP: A Framework for Aligning X-Modal Instruction Aware Representations to LLMs and Emergent Cross-modal Reasoning", Accepted to European Conference on Computer Vision (2024)
- Panagopoulou, Artemis*, Coby Melkin*, and Chris Callison-Burch. "Evaluating Vision-Language Models on Bistable Images." In Proceedings of The 13th edition of the Workshop on Cognitive Modeling and Computational Linguistics (CMCL 2024) **Best Paper Award**
- Xue, Le, Ning Yu, Shu Zhang, Artemis Panagopoulou, Junnan Li, Roberto Martín-Martín, Jiajun Wu, Caiming Xiong, Ran Xu, Juan Carlos Niebles, Silvio Savarese." ULIP-2: Towards Scalable Multimodal Pre-training for 3D Understanding" Accepted to Conference in Computer Vision and Pattern Recognition (2024)
- Chakrabarty, Tuhin, Arkadiy Saakyan, Olivia Winn, Artemis Panagopoulou, Yue Yang, Marianna Apidianaki, and Smaranda Muresan. "I Spy a Metaphor: Large Language Models and Diffusion Models Co-Create Visual Metaphors." In The 61st Annual Meeting Of The Association For Computational Linguistics. 2023.
- Yang, Yue, Artemis Panagopoulou, Shenghao Zhou, Daniel Jin, Chris Callison-Burch, and Mark Yatskar. "Language in a Bottle: Language Model Guided Concept Bottlenecks for Interpretable Image Classification." Accepted to Conference in Computer Vision and Pattern Recognition (2023)
- Yue Yang*,Artemis Panagopoulou*, Marianna Apidianaki, Mark Yatskar and Chris Callison-Burch. "Visualizing the Obvious: A Concreteness-based Ensemble Model for Noun Property Prediction." Findings of EMNLP 2022.
- Panagopoulou, Artemis, Manni Arora Li Zhang Dimitri Cugini, Weiqiu You, Yue Yang Liyang Zhou, Yuxuan Wang Zhaoyi Hou, Alyssa Hwang, Lara Martin, Sherry Shi Chris Callison-Burch, and Mark Yatskar. "QuakerBot: A household dialog system powered by large language models", Alexa Prize TaskBot Challenge Proceedings (2022)
- Yue Yang, Artemis Panagopoulou, Qing Lyu, Li Zhang, Mark Yatskar, Chris Callison-Burch (2021). "Visual Goal-Step Inference using wikiHow." EMNLP 2021 (Oral).
- Yang, Yue, Joongwon Kim, Artemis Panagopoulou, Mark Yatskar, and Chris Callison-Burch. "Induce, edit, retrieve: Language grounded multimodal schema for instructional video retrieval." arXiv preprint arXiv:2111.09276 (2021)
- Chaney, Kenneth, Artemis Panagopoulou, Chankyu Lee, Kaushik Roy, and Kostas Daniilidis. "Self-supervised optical flow with spiking neural networks and event based cameras." In 2021 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), pp. 5892-5899. IEEE, 2021.

ACADEMIC SERVICE

Reviewed for ACL ARR (February, 2024)
Reviewed for Student Research Workshop at the Annual Meeting of the Association for Computational Linguistics (ACL SRW, 2023,2024)
Reviewed for The 61st Annual Meeting of the Association for Computational Linguistics (ACL, 2023)

TEACHING EXPERIENCE

Instructor *Sept, 2022 - Dec, 2022*
Prison Teaching Initiative at Princeton University, Southwoods State Prison
Instructors: *Artemis Panagopoulou, Joe Abatte, Uthsav Chitra*

Teaching Assistant *Aug, 2022 - Dec, 2022*
Course: *CIS 530: Natural Language Processing*
Instructor: *Prof. Mark Yatskar*

Elementary School Instructor *Aug, 2021 - May, 2022*
Python Coding Curriculum at Kohelet Yeshiva School (4-5 grade)
Instructor: *Artemis Panagopoulou*

Teaching Assistant *Jan, 2022 - May, 2022*
Course: *CIS 700: Interactive Fiction and Text Generation*
Instructor: *Prof. Chris Callison-Burch, Dr. Lara Martin*

Teaching Assistant *Aug, 2021 - Dec, 2021*
Course: *CIS 521: Introduction to Artificial Intelligence*
Instructor: *Prof. Chris Callison-Burch*

Head Teaching Assistant *Aug, 2018 - May, 2019*
Course: *MCIT 592: Mathematical Foundations of Computer Science*
Instructor: *Prof. Val Tannen*

Teaching Assistant *Jan, 2018 - May, 2018*
Course: *CIS 262: Automata, Computability, and Complexity*
Instructor: *Dr. Nima Roohi*

LEADERSHIP AND ACTIVITIES

Advancing Women in Engineering (AWE), Board Member *August 2023 - Present*
Association of Alumnae (AofA), Board Member *May 2023 - Present*
Alexa Taskbot Competition [Finalist] *Aug 2021 - May 2022*

- Co-Lead University of Pennsylvania's Team for the Alexa Taskbot Challenge. We implemented a live Alexa Skill that guides users through tasks and recipes.

Mind, Intelligence, Research, and Analysis (MIRA) Group *May 2018 - Aug 2019*

- Graduate philosophy research and training group focused on issues in philosophy of mind and language, cognitive science, and epistemology led by Professor Miracchi.

Women in Computer Science (WiCS) *Jan 2019 - May 2019*

- Acted as a mentor to freshman female computer science majors.