ARTEMIS PANAGOPOULOU

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EDUCATION

University of Pennsylvania, Philadelphia, PA

Doctor of Philosophy, Computer and Information Science   *Aug, 2021 - Expected May, 2027*
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 - August, 2023*
Salesforce, Palo-Alto CA

- Conducting multimodal AI research under the supervision of Dr. Juan Carlos Niebles.

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)

Research Assistant   *May, 2018 - Oct, 2018*
Computer Science Department, University of Pennsylvania

- Applied K-reversible inference on the synthesis of Turkish morphology. (Supervisor: Prof. Mitch Marcus)

INDUSTRY EXPERIENCE

Co-founder and Software Developer *Aug 2020 - Aug 2021*
Aarogya LLC, Philadelphia, US and Bangalore, India

- Co-founded aarogya.life, an award winning health-tech social enterprise creating a platform to enable low-income patients to access essential medicines while preventing wastage of medicines lying unused in warehouses.

- Received the President's Engagement Prize which is competitively granted to academically excellent and civically engaged Penn seniors to design and undertake fully-funded engagement projects during the first year post grad.

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*

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), Ambassador	*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.

- Gained experience with Amazon Web Services (AWS) and Alexa Skills Kit (ASK).

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.

Ivy League Undergraduate Research Symposium   *Jan 2018 - Aug 2018*

- Led an end-to-end application development project aimed to automate networking and scheduling for the symposium.

- Managed team of 3 developers with bi-weekly Agile sprints to build the Android application.

- Designed and built core backend, UI, and testing infrastructure.

PUBLICATIONS

- Xue, Le, Ning Yu, Shu Zhang, <u>Artemis Panagopoulou</u>, 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)

- <u>Panagopoulou, Artemis</u>, 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" Under Review

- Yang, Yue, <u>Artemis Panagopoulou</u>, 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*, <u>Artemis Panagopoulou*</u>, Marianna Apidianaki, Mark Yatskar and Chris Callison-Burch. "Visualizing the Obvious: A Concreteness-based Ensemble Model for Noun Property Prediction."* Findings of EMNLP 2022.

- *<u>Panagopoulou, Artemis</u>, 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, <u>Artemis Panagopoulou</u>, Qing Lyu, Li Zhang, Mark Yatskar, Chris Callison-Burch (2021). "Visual Goal-Step Inference using wikiHow." EMNLP 2021 (Oral).*

- *Yang, Yue, Joongwon Kim, <u>Artemis Panagopoulou</u>, 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, <u>Artemis Panagopoulou</u>, 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.*