Andy Liu

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Language Technologies Institute
Carnegie Mellon University
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◇ EDUCATION

2023 – Present **Carnegie Mellon University**, Pittsburgh, PA
PH.D. IN LANGUAGE AND INFORMATION TECHNOLOGIES
Advisors: Mona Diab, Daniel Fried
Cumulative GPA: 3.94
Relevant Coursework: Machine Learning & Game Theory, Large Language Models, Quantitative Evaluation of Language Technologies, Deep Reinforcement Learning, Advanced Natural Language Processing, Multimodal Machine Learning

2019 – 2023 **Harvey Mudd College (HMC)**, Claremont, CA
B.S. IN COMPUTER SCIENCE & MATHEMATICS
CONCENTRATION IN SCIENCE, TECHNOLOGY, AND SOCIETY

◇ HONORS & AWARDS

2023 DEPARTMENTAL HONORS, HMC
2019 - 2023 HARVEY S. MUDD MERIT AWARD, HMC
2019 - 2023 LOCKHEED MARTIN STEM SCHOLARSHIP
2019 - 2023 NATIONAL MERIT SCHOLARSHIP

◇ PUBLICATIONS

— **Conference Proceedings** —

2024 **Andy Liu**, Mona Diab, and Daniel Fried. "Evaluating Large Language Model Biases in Persona-Steered Generation." *Findings of the Annual Meeting of the Association for Computational Linguistics, 2024.*

2023 **Andy Liu**, Hao Zhu, Emmy Liu, Yonatan Bisk, and Graham Neubig. "Computational Language Acquisition with Theory of Mind." *The Eleventh Annual International Conference on Learning Representations.*

— **Preprints & Manuscripts** —

(in review) Abhishek Kulkarni*, **Andy Liu***, Jean-Raphaël Gaglione, Daniel Fried, and Ufuk Topcu. "Dynamic Coalition Structure Detection in Natural-Language-based Interactions."

(in review) Wenkai Li*, Jiarui Liu*, **Andy Liu**, Xuhui Zhou, Mona Diab, and Maarten Sap. "BIG5-CHAT: Shaping LLM Personalities Through Training on Human-Grounded Data."

◇ TEACHING

Fall 2022 NATURAL LANGUAGE PROCESSING (CSCI 159), Teaching Assistant, HMC
Fall 2021 PRINCIPLES OF COMPUTER SCIENCE (CSCI 060), Teaching Assistant, HMC

◇ INTERNSHIPS & ASSISTANTSHIPS

— **Academia** —

1/22 – 5/23 **HMC Department of Computer Science**, Claremont, CA
UNDERGRADUATE RESEARCHER, Lab for CATS (Cognition and Attention over Time and Space)
Advisor: Calden Wloka

Fine-tuned models for action recognition on 3D video input, then used GradCAM-based network visualization techniques to analyze neural network attention and interpret model failure cases.

5/22 – 8/22 **CMU Language Technologies Institute**, Pittsburgh, PA
RESEARCH INTERN, NeuLab
Advisors: Graham Neubig, Yonatan Bisk

Studied computational models of reinforcement learning-based language learning agents to study the influences of theory of mind modeling and environmental pressures on language acquisition.

1/21 – 5/23 **HMC Department of Mathematics**, Claremont, CA
UNDERGRADUATE RESEARCHER, Nonlinear & Complex Systems Research Group
Advisor: Heather Zinn Brooks

Extended existing continuous models of opinion dynamics on a social network to consider cases where agents have different underlying belief systems.

— **Industry** —

9/22 – 5/23 **eBay**, San Jose, CA
CAPSTONE TEAM PROJECT MEMBER, Member to Member Messaging
Supervisor: Kishore Paul

Developed clustering and sentiment analysis techniques to analyze Member-to-Member messaging on eBay and predict consumer outcomes.

5/21 – 8/21 **Meta**, Menlo Park, CA
SOFTWARE ENGINEERING INTERN, Stories Delivery
Supervisor: Shafiul Azam Chowdhury

Designed, implemented, and tested neural networks to predict whether increased story duration would increase engagement, then integrated models and supporting data pipelines into backend production code.