

ALLEN CHANG

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[allencchang](#)

I am an incoming Ph.D. student at the University of Pennsylvania's NLP group.
My undergraduate research was on human behavior recognition in
multimodal human-machine interaction.

EDUCATION

Fall 2024 **University of Pennsylvania**
Ph.D. Computer and Information Science
Advisor: Mark Yatskar

2020-Present **University of Southern California**
B.S. Computer Science, B.S. Applied & Computational Mathematics
Advisors: Maja Matarić, Jesse Thomason, Stefanos Nikolaidis
Cumulative GPA: 3.95 / 4.0

WORK EXPERIENCE

Summer 2023 **Carnegie Mellon University**, *Robotics Institute Summer Scholar*
Advisor: Jean Oh

Summer 2022 **Massachusetts Institute of Technology**, *MIT Haystack Observatory REU Intern*
Advisor: Mary Knapp

Summer 2021 **Tsinghua University**, *Research Fellow*
Advisor: Shaoxu Song

PUBLICATIONS (* INDICATES EQUAL CONTRIBUTION)

2024 **Quality-Diversity Generative Sampling for Learning with Synthetic Data**
AAAI **Allen Chang**, Matthew C. Fontaine, Serena Booth, Maja J. Matarić, and Stefanos Nikolaidis.
24% Accept. Rate *Conference on Artificial Intelligence (AAAI)*, 2024. [PDF](#)

2023 **Multimodal Speech Recognition for Language-Guided Embodied Agents**
INTERSPEECH **Allen Chang**, Xiaoyuan Zhu, Aarav Monga, Seoho Ahn, Tejas Srinivasan, and Jesse Thomason.
50% Accept. Rate *Conference of the International Speech Communication Association (INTERSPEECH)*, 2023. [PDF](#)
Oral presentation.

2023 **Removing Radio Frequency Interference from Auroral Kilometric Radiation with Stacked Autoencoders**
ICASSP **Allen Chang**, Mary Knapp, James LaBelle, John Swoboda, Ryan Volz, and Philip. J. Erickson.
45% Accept. Rate *International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, 2023. [PDF](#)

2022 **Evaluating Temporal Patterns in Applied Infant Affect Recognition**
ACII **Allen Chang** *, Lauren Klein *, Marcelo R. Rosales, Weiyang Deng, Beth A. Smith, and Maja J. Matarić.
46% Accept. Rate *Affective Computing and Intelligent Interaction (ACII)*, 2022. [PDF](#)
Long oral presentation.

AWARDS & HONORS

Scholarships

2024 **NSF Graduate Research Fellowship (GRFP)**
2037 recipients / 16000 (Top 13%). Premier research scholarship for Ph.D. students.

- 2023 **Barry M. Goldwater Scholarship**
413 recipients / 5000 (**Top 10%**). Premier research scholarship for UGs pursuing STEM research.
- 2022 **USC Provost's Undergrad Research Fellowship**
Research scholarship for UGs. Awarded, funding declined due to another concurrent fellowship.
- 2022 **USC Viterbi School of Engineering CURVE Research Fellowship**
Research scholarship for UGs.
- 2021 **USC Academic Achievement Award Scholarship**
Scholarship for UGs pursuing multiple degrees.

Awards, Distinctions, & Prizes

- 2024 **USC Grand Challenge Scholar**
- 2024 **USC Discovery Scholar**
- 2024 **USC Global Scholar**
- 2021 **USC CIMES Engineering Mathematics Prize**

Honor Programs & Societies

- 2022 **Tau Beta Pi Honor Society**
- 2021 **Phi Kappa Phi Honor Society**

TEACHING

- 2021-2023 **USC Center for AI in Society's Student Branch (CAIS++)**, *Curriculum Lead*
- Maintained an AI curriculum at <https://caisplusplus.usc.edu/curriculum/>
 - Each fall, I taught a semester-long AI curriculum to > 40 UGs
 - Mentored 2 AI for social good research project teams
 - Conducted K-12 machine learning education outreach
- Spring 2021 **USC CSCI 170: Discrete Methods in Computer Science**, *Undergraduate Teaching Assistant*
- Facilitated discrete mathematics (e.g. logic, set theory, graph theory) curriculum
 - Led weekly office hours and graded midterms and final examinations

INVITED TALKS

- June 11, 2024 **Cohere For AI**, *Community Talk Seminar*
Title: Quality-Diversity Generative Sampling (QDGS) for Learning with Synthetic Data

SERVICE

Leadership

- 2021-2023 **USC Center for AI in Society's Student Branch (CAIS++)**
Co-President (May 2022-May 2023) • Project Lead (Jul 2022-May 2023) • Curriculum Lead (Aug 2021-Dec 2022) • Vice President of Operations (Aug 2021-Apr 2022)
- 2020-2022 **USC Association for Computing Machinery (ACM)**
Vice President (Jan 2022-May 2022) • Operations Co-Chair (Dec 2020-Dec 2021) • Events & Membership Coordinator (Aug 2020-Nov 2020)

Volunteering

- 2024 **Conference on Artificial Intelligence (AAAI)**
- 2022 **Affective Computing and Intelligent Interaction (ACII)**