

## Research Interests

Machine Learning, Multimodal Intelligence, Natural Language Processing, Information Retrieval.

## Education

- 09/24-06/25 **MEng in Electrical Engineering and Computer Science, MIT.**  
(Expected) Thesis Topic: Multimodal Synthesis and Creation, Gesture Understanding, Grounded LLMs  
Thesis Advisor: Paul Pu Liang
- 9/21-06/25 **BS in Mathematics, Electrical Engineering and Computer Science, MIT.**  
(Expected) GPA: **4.9/5.0**  
Coursework: Quantitative Methods for Natural Language Processing, Project Laboratory in Mathematics

## Research Experience

- 08/24- Present **Multisensory Intelligence Group, PI: Paul Pu Liang.**
- Creating benchmark for multimodal synthesis and content creation of music videos
  - Building benchmark of mime performance videos for emotion analysis from gesture
  - Grounding LLMs in the physical world by connecting them to sensor data representations
- 05/23- Present **University of Texas at Austin NLP Group, PIs: Junyi Jessy Li and Byron Wallace.**
- Co-lead for project on social media medical claim checking with multi-document RCT abstract retrieval and synthesis. Working with six medical experts on annotation pipeline
  - Published research on factuality evaluation of plain language summarization of medical evidence at ACL 2024. Performed experiments, metrics evaluation, and results analysis
- 6/22-8/22 **Martin Rinard Lab.**
- Analyzed mechanistic interpretability of CodeGen models trained on Karel language
  - Created tool for attention visualizations to study patterns of Karel rules to state [\[example\]](#)

## Publications

### Conference

FACTPICO: Factuality Evaluation for Plain Language Summarization of Medical Evidence.  
*Sebastian Joseph\*, **Lily Chen\***, Jan Trienes, Hannah Louisa Göke, Monika Coers, Wei Xu, Byron C Wallace, Junyi Jessy Li.*  
Association for Computational Linguistics (ACL), 2024. [\[link\]](#)

### Workshop

Analyzing Gender Accuracy and Gender Quality in Multilingual Machine Translation with Large Language Models.  
*Sarah Zhang\*, **Lily Chen\***, William Zhang.*  
Widening Natural Language Processing (WiNLP) Workshop at EMNLP, 2023. [\[link\]](#)

## Industry Experience

- 6/22-8/22 **DRW Holdings, LLC, Quantitative Trading Intern, Chicago, IL.**
- Completed quantitative research project of Bayesian Skew Fitter for crypto options
  - Researched and implemented proprietary options trading strategies, shadowed desks
- 1/22-2/22 **Hudson River Trading, Crypto Tech Intern, New York City.**
- Built an optimal routing algorithm for pathfinding between crypto liquidity pools
  - Researched DeFi technologies, helped build DEX (Decentralized Exchange) aggregator

## Selected Awards

### For PhD

2023 GFSD PhD Fellowship – full tuition and \$20,000 stipend for 6 years

### For master's

2024 AAUW Selected Professions Fellowship – \$20,000

2023 ASQ Ellis R Ott Scholarship – \$7,500

### For bachelor's

2024 Two Sigma Undergraduate Scholarship – \$15,000

2022-2024 Live Más Scholarship –\$10,000

2023 Cognizant Trust & Safety Scholarship –\$10,000

2023 Raytheon Technologies Scholarship –\$10,000

2023 NAVISITE Next Stemminist Scholarship – \$10,000

2023 Hedy Lamarr Achievement Award –\$7,500

2023 Cadence Diversity in Technology Scholarship –\$5,000

2023 Nutanix Advancing Women in Technology Award –\$5,000

2023 NSPE Auxiliary Legacy Scholarship – \$5,000

2023 Zonta International Women in STEM Scholarship –\$5,000

2023 Interface Systems Tech for Good Scholarship –\$5,000

2022 Malwarebytes Scholarship – \$10,000

2022 FS-ISAC Scholarship – \$10,000

2022 SIA Women in Security Forum Scholarship – \$10,000

2022 Ridgeline International Scholarship – \$5,000

2022 Society of Women Engineers Scholarship –\$5,000

2022 VMware Achievement Scholarship –\$10,000

2021 Coca Cola Scholarship – \$20,000

## Activities

09/22-05/23 MIT Society of Women Engineers, Board of Technology.

09/22-05/23 MIT Women in EECS, Mentor.

## Teaching

Spring 2023 18.062: Mathematics for Computer Science, Teaching Assistant, MIT.

## Skills

Languages English (fluent), Mandarin Chinese (fluent), Spanish (intermediate)

Programming Python, C, Java, TypeScript, Minispec

Software PyTorch, NumPy, pandas, Hugging Face, seaborn,  $\LaTeX$