

## 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: Grounded Multimodal LLMs in sensor data  
Thesis Advisor: Paul Pu Liang
- 09/21-06/25 **BS in Mathematics, Electrical Engineering and Computer Science, MIT.**  
(Expected) GPA: **4.9/5.0**

## Research Experience

- 08/24-Present **Multisensory Intelligence Group, PI: Paul Pu Liang.**
- Grounding LLMs in the physical world by connecting them to sensor data representations
  - Analyzing IMU, thermal, capacitance, and depth sensor data
- 05/23-Present **University of Texas at Austin NLP Group, PIs: Junyi Jessie 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
- 06/22-08/22 **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

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 Jessie Li.*  
Association for Computational Linguistics (ACL), 2024. [\[link\]](#)

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

- 06/22-08/22 **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
- 01/22-02/22 **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 Doctoral Studies

- 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
- 2023-2024 NSF CRA-WP DREU Program –\$7,000
- 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
- 2023 ISSAEF Scholarship –\$3,500
- 2023 Prysmian Women in STEM Scholarship –\$2,500
- 2023 SBB Research Group Scholarship –\$2,500
- 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 ISC(2) Undergraduate Scholarship –\$3,000
- 2022 MIT Chevron Prize –\$2,000
- 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
- Software PyTorch, NumPy, pandas, Hugging Face, seaborn,  $\LaTeX$