Jane Yang

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Current position

Lab Technician, Developmental Intelligence Lab, UT Austin

Education

2018-2022 B.S. in Cognitive Science - Machine Learning & Neural Computation, UC San Diego
Minor: Computer Science
Advisor: Judith Fan, Benjamin Bergen
Honor thesis: Communicating understanding of physical dynamics in natural language.

summer 2023 The Computational Summer School on Modeling Social and Collective Behavior (COSMOS), Konstanz, Germany

Honors & awards

2022 Distinction in Cognitive Science, UC San Diego
2022 Triton Research and Experiential Learning Scholars Award, UC San Diego
2019-2020 Provost's Honors, UC San Diego
2019 IEEE Quarterly Project 1st Place, UC San Diego
2019 HackSC 1st Place, USC

Publications & talks

Conference proceedings

2023 **Yang, J.**, Smith, L., Crandall, D., and Yu, C.(2023) Using manual actions to create visual saliency: an outside-in solution to sustained attention and joint attention. *Proceedings of the 45th Annual Meeting of the Cognitive Science Society.*
2022 Wang, H., **Yang, J.**, Tamari, R., and Fan, J.(2022), Communicating understanding of physical dynamics in natural language. *Proceedings of the 44th Annual Meeting of the Cognitive Science Society.*

Presentations

2023 Using manual actions to create visual saliency: an outside-in solution to sustained attention and joint attention. Talk presented at *45th Annual Meeting of the Cognitive Science Society.*
2023 Using manual actions to create visual saliency: an outside-in solution to sustained attention and

joint attention. Poster presented at *The Computational Summer School on Modeling Social and Collective Behavior (COSMOS).*

2023 Using manual actions to create visual saliency: an outside-in solution to sustained attention and joint attention. Poster presented at *Workshop on Natural Environments Tasks and Intelligence.*

2022 Communicating understanding of physical dynamics in natural language. Poster presented at *44th Annual Meeting of the Cognitive Science Society.*

2022 Communicating understanding of physical dynamics in natural language. Talk presented at *UCSD 35th Annual Undergraduate Research Conference.*

Research Experience

2022- **UT Austin, Developmental Intelligence Lab**
Lab Technician (Principal Investigator: Chen Yu)
•Collect data using head-mounted eye trackers on 12-36 months old infants and their caregivers.
•Build data analysis functions in Matlab and Python to make inferences about children's learning mechanisms.
•Incorporate Whisper to automatically transcribe speech.
•Train YOLOv8 to automatically detect objects in infants' and parents' view.
•Construct 3D models of experimental stimuli and lab space.
•Generate motion tracking data for in-lab experiment sessions.

2021-2022 **UC San Diego, Cognitive Tools Lab**
Research Assistant (Principal Investigator: Judith Fan)
•Completed an honors thesis examining how people communicate abstract physics knowledge between individuals.
•Developed web-based experiments where participants infer and explain alien physics dynamics.
•Annotated 480 collected text responses using Doccano.
•Performed text data processing and analysis.

2020-2021 **UC San Diego, Language and Comprehension Lab**
Research Assistant (Principal Investigator: Eva Wittenberg)
•Built web-based psycholinguistic experiments to study the effect of verbal reduplication on event conceptualization in Mandarin Chinese.
•Created imaginary Chinese words by altering a part of the genuine words in Illustrator.
•Assisted development of a pen with pressure sensors to record participants' physiological reactions to linguistic stimuli.

Teaching Experience

UT Austin, Department of Psychology

2023 PSY 371M Introduction to Machine Learning

UC San Diego, Department of Cognitive Science

2022 COGS 189 Brain Computer Interfaces

2021 COGS 101C Language

Skills

Communication: English, Mandarin, Hokkien
Modeling and Analysis: Matlab, Python, R, C, C++, Java, Clojure
Experimental Design: JavaScript, HTML, CSS, Node.js
Machine Learning Libraries: PyTorch, TensorFlow
Natural Language Processing: HuggingFace, spaCy, NLTK
Data Management: MongoDB
Software and Tools: git, LaTeX, FFMPEG, Datavyu, Audacity, ELAN, Illustrator, Unity, Blender, AutoCAD, SolidWorks

Mentorship

UT Austin

2023- Elton Martinez
2023- Anagha Kenikar
2023- Jacob Rivera
2023- Ruchi Shah
2023 Carson Bruno
2023 Bryanna Boone