

ZEXIN (JASON) XU

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RESEARCH INTERESTS

Robotics, Reinforcement Learning, Embodied Agent, Alignment/Post-Training, Educational Technology

EDUCATION

The University of Texas at Dallas

Ph.D. Student in Electrical & Computer Science

Aug 2024 – Present

Advisor: [Dr. Yu Xiang](#), [Dr. Wei Yang](#)

The Ohio State University

M.S. in Computer Science and Engineering

Aug 2021 – May 2023

Advisor: [Dr. Yu Su](#)

The Ohio State University

B.S. in Computer Science and Engineering / Magna Cum Laude, Dean's List

Jan 2018 – Dec 2020

EXPERIENCE

Team Lead

Aug 2024 – Jun 2025

The University of Texas at Dallas (Amazon Nova AI Challenge: Trusted AI)

Richardson, TX

- Led team ASTRO representing UTD, participated in the first Nova AI Trusted AI challenge on Code LLM red teaming and defense, selected as one of **5 red teams globally**.
- Achieved **2nd place in 2 tournaments** and finalist status; published paper in Amazon Science proceedings.
- Developed red teaming pipeline to trigger defense models on generating malicious/vulnerable code using **CodeGuru**, **Bedrock**, **Cobot** and other AWS services.

Software Engineering Lead

Nov 2023 – Present

University of California, Irvine (Part Time)

Irvine, CA

- Co-led TimeWise educational conversational agent project with researchers from **UCI**, **NTU**, and **JHU**.
- Selected as **finalist in 2024 Tools Competition** among 2,000 submissions; built React-based Chrome extension with full AWS infrastructure.

Research Assistant, Software Engineering Lead

Aug 2022 – Jun 2023

The Ohio State University (Amazon Alexa Prize SimBot Challenge)

Columbus, OH

- Led engineering team for SalsaBot in the first Alexa Prize Simbot Challenge on **embodied agent**, architecting state-driven dialogue system with language macro module using AWS.
- Elevated team rating from **2.36 to 3.64 out of 5.00**, achieving top-three standing in final month through comprehensive testing methodologies.

Data Scientist Intern

May 2022 – Aug 2022

AI Camp

Palo Alto, CA

- Directed a team of over 15 students in developing cutting-edge NLP web applications, harnessing the power of **GPT-2** and **Flask**. This initiative culminated in an outstanding **average rating of 4.53/5.00**.
- Modernized the internal rating mechanism and spearheaded pivotal discussions on curriculum enhancement.
- Played a key role in shaping the NLP, deep learning, and Flask curricula, and actively participated in periodic curriculum updates.

Software Developer Lead

Sep 2020 – Dec 2020

Sponsored by Honda

Columbus, OH

- Designed and implemented an advanced self-service kiosk dialogue system for internal applications, equipped with chatbot functionalities, enhanced by integrating a cutting-edge language understanding module using **Microsoft Azure Bot Framework** and **LUIS**.
- Established a resilient software architecture and streamlined the development workflow.

PUBLICATIONS

Note: * denotes equal contribution. Full list: [Google Scholar](#)

1. **COMET: Closed-loop orchestration for malicious elicitation techniques in code models**
[Zexin Xu](#), Tingxi Li, Ravishka Shemal Rathnasuriya, Zihe Song, Jun Ren, Bhavesh Mandalapu, Soroush Setayeshpour, Xinya Du, Wei Yang
Amazon Nova AI Challenge Proceedings, 2025
2. **LLM4SR: A survey on large language models for scientific research**
Ziming Luo*, Zonglin Yang*, [Zexin Xu](#), Wei Yang, Xinya Du
arXiv preprint, 2025
3. **SoK: Efficiency Robustness of Dynamic Deep Learning Systems**
Ravishka Rathnasuriya, [Zexin Xu*](#), Tingxi Li*, Zihe Song*, Mirazul Haque, Simin Chen, Wei Yang
USENIX Security, 2025
4. **Beyond pass or fail: A multi-dimensional benchmark for mobile UI navigation**
Dezhi Ran, Mengzhou Wu, Hao Yu, Yuetong Li, Jun Ren, Yuan Cao, Xia Zeng, Haochuan Lu, [Zexin Xu](#), Mengqian Xu, Ting Su, Liangchao Yao, Ting Xiong, Wei Yang, Yuetang Deng, Assaf Marron, David Harel, Tao Xie
arXiv preprint, 2025
5. **Leveraging Generative AI in Designing and Delivering Individualized Responsive Feedback for Pre-service Teachers in Higher Education**
Jingwen He, Tingting Li, [Zexin Xu](#), Kui Xie
Artificial Intelligence and Human Agency in Education: Volume Two: AI for Equity, Well-Being, and Innovation in Teaching and Learning, 2025
6. **SalsaBot: Towards a Robust and Generalizable Embodied Agent**
Chan Hee Song, Jiaman Wu, Ju-Seung Byun, [Zexin Xu](#), Vardaan Pahuja, Goonmeet Bajaj, Samuel Stevens, Ziru Chen, Yu Su
Embodied AI Workshop at CVPR, 2023
7. **Towards a Robust and Generalizable Embodied Agent**
Chan Hee Song, Jiaman Wu, Ju-Seung Byun, [Zexin Xu](#), Vardaan Pahuja, Goonmeet Bajaj, Samuel Stevens, Ziru Chen, Yu Su
Amazon Science, 2023
8. **Exploring the Role of Artificial Intelligence in Facilitating Assessment of Writing Performance in Second Language Learning**
Zilu Jiang, [Zexin Xu](#), Zilong Pan, Jingwen He, Kui Xie
Languages, 2023
9. **Measuring Elementary Students' Behavioral Engagement in Web-based Science Inquiry Learning**
Jingwen He, Bihui Jin, [Zexin Xu](#), Danhui Zhang
Journal of Online Learning Research, 2022

TEACHING

CS4375 Introduction to Machine Learning — The University of Texas at Dallas Graduate Teaching Assistant	Fall 2025
CE4337 Programming Language Paradigms — The University of Texas at Dallas Graduate Teaching Assistant	Fall 2025
CS5343 Algorithm Analysis and Data Structures — The University of Texas at Dallas Graduate Teaching Assistant	Summer 2025

SE3377 Systems Programming — The University of Texas at Dallas <i>Graduate Teaching Assistant</i>	Summer 2025
CE4337 Programming Language Paradigms — The University of Texas at Dallas <i>Graduate Teaching Assistant</i>	Spring 2025
CE4337 Programming Language Paradigms — The University of Texas at Dallas <i>Graduate Teaching Assistant</i>	Fall 2024
CSE6521 Advanced Artificial Intelligence — The Ohio State University <i>Graduate Teaching Associate</i>	Fall 2022
CSE2321 Foundations I: Discrete Structures — The Ohio State University <i>Undergraduate Teaching Assistant</i>	Spring 2020
CSE3521 Artificial Intelligence I: Basic Techniques — The Ohio State University <i>Undergraduate Teaching Assistant</i>	Fall 2019

AWARDS

Amazon NOVA AI Challenge (Trusted AI) Grant <i>Amount Awarded: \$250,000</i>	Jan 2025 - Jul 2025
Amazon NOVA AI Challenge (Trusted AI) AWS Research Credit <i>Amount Awarded: \$150,000 per month, Total Amount Awarded: \$1,350,000</i>	Oct 2024 - Jul 2025

SKILLS

Certificate: AWS Cloud Technical Essentials
Languages: Python, Java, C/C++, C#, SQL, JavaScript, R, HTML/CSS
Frameworks & Tools: AWS, Django, Flask, Node.js, Next.js, Docker, Microsoft Azure Bot Framework, Git, CUDA
Libraries: LangChain, PyTorch, OpenCV, Pandas, NumPy, Scikit-learn, Matplotlib, OpenMP
Databases: MongoDB, MySQL, PostgreSQL

REFERENCE

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