Shiyuan Huang

Ph.D. Student · Computer Science and Engineering

University of California, Santa Cruz, 1156 High Street Santa Cruz, CA 95064

shuan101@ucsc.edu | https://shiyuan-eric.github.io/website/ | Shiyuan-eric | shiyuan-huang

Education

University of California, Santa Cruz — *Santa Cruz, California*

Ph.D. in Computer Science and Engineering — *2024 – Present*

- Advisors: Dr. Leilani H. Gilpin and Dr. Ian Lane
- Research Interests: Explainability and Trustworthiness in Language Models

University of California, Santa Cruz — *Santa Cruz, California*

M.S. in Computer Science and Engineering — *2022 – 2024*

- Advisor: Dr. Leilani H. Gilpin
- Graduated with a GPA of 3.97/4.00

University of California, Santa Cruz — *Santa Cruz, California*

B.S. in Computer Engineering — *2018 – 2022*

- Graduated with Highest Honor (Summa Cum Laude)
- Graduated with a major GPA in major coursework of 3.92/4.00

Professional Experience

2025- **Graduate Student Researcher**, Baskin School of Engineering, UC Santa Cruz

2022- **Graduate Teaching Assistant**, Baskin School of Engineering, UC Santa Cruz

2021-2022 **Undergraduate Tutor, Reader**, Baskin School of Engineering, UC Santa Cruz

2021 **Software Engineer Intern**, Maxen Technology, Montréal, Québec, Canada

Publications

Sicong Huang, Jincheng He, **Shiyuan Huang**, Karthik Raja Anandan, Arkajyoti Chakraborty, and Ian Lane. 2025b. UCSC at SemEval-2025 task 3: Context, models and prompt optimization for automated hallucination detection in LLM output. In Proceedings of the 19th International Workshop on Semantic Evaluation (SemEval-2025).

Shiyuan, Huang, Siddarth Mamidanna, Shreedhar Jangam, Yilun Zhou, Leilani H. Gilpin. 2023. Can Large Language Models Explain Themselves? A Study of LLM-Generated Self-Explanations.

Presentations

Contributed Presentations

Sicong Huang, Jincheng He, **Shiyuan Huang**, Karthik Raja Anandan, Arkajyoti Chakraborty, and Ian Lane. 2025b. Context, Models and Prompt Optimization for Automated Hallucination Detection in LLM Output. BayLearn 2025: Santa Clara, California.

Sicong Huang, Jincheng He, **Shiyuan Huang**, Karthik Raja Anandan, Arkajyoti Chakraborty, and Ian Lane. 2025b. UCSC at SemEval-2025 task 3: Context, models and prompt optimization for automated hallucination detection in LLM output. The 19th International Workshop on Semantic Evaluation, ACL 2025: Vienna, Austria.

Shiyuan, Huang, Siddarth Mamidanna, Shreedhar Jangam, Yilun Zhou, Leilani H. Gilpin. 2024. Can Large Language Models Explain Themselves? A Study of LLM-Generated Self-Explanations. BayLearn 2024: Apple, Cupertino, California.

Shiyuan, Huang. 2024. Exploring Explainability and Interpretability in Generative AI. YRRSDS 2024; SIGDIAL 2024: Kyoto University, Kyoto, Japan.

Awards, Fellowships, & Grants

2025 **Best System Paper Award**, The 19th International Workshop on Semantic Evaluation, Vienna, Austria

2024 **Deans' and Chancellor's Research Award**, Spring Quarter, UC Santa Cruz

2022 **Dean's Honor**, Spring Quarter, UC Santa Cruz

2021 **Dean's Honor**, Fall Quarter, UC Santa Cruz
Dean's Honor, Spring Quarter, UC Santa Cruz

2020 **Dean's Honor**, Fall Quarter, UC Santa Cruz
Dean's Honor, Summer Quarter, UC Santa Cruz
Dean's Honor, Winter Quarter, UC Santa Cruz

2019 **College Scholar Program**, UC Santa Cruz
Dean's Honor, Fall Quarter, UC Santa Cruz

Research Experience

AI Purchase Copilot(Analyzer) *Santa Clara,Santa Cruz, CA*
Advisor: Dr. Ian Lane *Jul. 2025 -*

- Collaboration with UCSC Financial Affairs
- Designing and developing an Purchase Copilot to help procurement professionals identify requests that need further review.
- An application-driven research project including knowledge injection, feedback learning, RAG, context protocols, and model fine-tuning.

University of California, Santa Cruz - Baskin School of Engineering *Santa Clara,Santa Cruz, CA*
Advisor: Dr. Leilani H. Gilpin and Dr. Ian Lane *Sept. 2024 -*

- Quantifying language model familiarity across diverse tasks and domains Using likelihood analysis
- Studied the knowledge boundaries, abstention capabilities, and linguistic biases of large language models.

Exploring the Interpretability of Language Models by Feature Attribution *Santa Cruz, CA*
Advisor: Dr. Leilani H. Gilpin *Jun. 2023 - Jun. 2024*

- Project Report: Can Large Language Models Explain Themselves? A Study of LLM-Generated Self-Explanations
- Applied feature attribution methods to large language models to evaluate explainability; conducted experiments comparing results with Occlusion and LIME, and measured similarity across different types of explanations.

Software Development Projects

BELS Assets Management System *UC Santa Cruz*
Advisor: Dr. Richard K Jullig *Jan. 2022 - Jun.2022*

- Developed a web-based system for Baskin Engineering Lab Support (BELS) that serves as a centralized platform for storing detailed information about assets and monitoring their current status

Baskin School of Engineering Course Scheduling Application *UC Santa Cruz*
Advisor: Dr. Richard K Jullig *Sept. 2021 - Dec.2021*

- Designed an application that monitors students' academic progress and offers personalized recommendations to enhance productivity

Maxen Technology *Montréal, Québec, Canada*
Software Development Intern *Jun. 2021 - Sept.2021*

- Collaborated with the software development team to design and implement backend endpoints using Django.

Teaching Experience

2024 **Programming Abstractions: Python**, Teaching Assistant
2023 **Programming Abstractions: Python**, Teaching Assistant
Fall 2022 **Programming Abstractions: Python**, Teaching Assistant
2022 **Beginning Programming in Python**, Tutor, Reader
2021 **Beginning Programming in Python**, Tutor, Reader

Outreach & Professional Development

Peer Review

Guest reviewer with Dr. Leilani H. Gilpin

Professional Memberships

Student Member, American Society for Engineering Education (ASEE)
Student Member, Association for Computing Machinery (ACM)