Timothy Liu

PhD Student in Linguistics @ UC Davis with a focus on NLP

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Education

University of California, Davis   **September 2024 - June 2029 (Expected)**
Program: PhD in Linguistics
Advisors: Kenji Sagae, David Corina

University of California, Davis   **Graduated June 2024**
Major: B.S. in Computational Cognitive Science | GPA: 3.891 | Summa Cum Laude
Minor: Computer Science

Research

Graduate Student Researcher | UC Davis Computational Linguistics Lab   **2024 - Present**
Introducing phonological information in the tokenization step of LLM training

Student Researcher | UC Davis Neurolinguistics Lab   **2023 - Present**
Developing speech aid recognition tools for cochlear implant users.
Investigating multimodality in lexical access.

Honors Thesis in Cognitive Science   **2024**
Used BERT to generate word pairs for control cases in heteronym priming experiment
Conducted a dual lexical decision task experiment on modality of lexical access

Annual Psychology Conference @ UC Davis   **2024**
When to Call it Quits: An Agent-Based Modeling Approach to Group Work
Proposed and conducted Agent-Based Modeling experiment with MASON9 Java framework

Undergraduate Research, Scholarship and Creative Activities Conference   **2024**
Electrophysiological Study of Haptic Stimulation: Implication for Cross-Modal Plasticity
Led a team of undergraduate students in an EEG study investigating deafness

Work Experience

Reader for Computational Linguistics (LIN 177)   **Fall 2024**
Level 2 Archery Instructor (UC Davis)   **2024 - 2025**

Presentations

T Liu, S Wood, and J. Schank (2024). Calling it Quits: An Agent-Based Modeling Approach to Collaborative Group Work. ACT 2024 (Poster)   **2024**

Selected Awards & Grants

Google Cloud Academic Research Grant   **2025**
Research grant to investigate novel LLM tokenization techniques

Provost's Fellowship in the Arts, Humanities and Social Sciences   **2025**
Fellowship awarded to one member of incoming cohort on merit

Glushko Prize   **2024**
Award for outstanding achievement in Undergraduate Cognitive Science

UC Davis Departmental Citation in Cognitive Science   **2024**
Award for outstanding academic and research achievement in Cognitive Science

Skills

Languages (computer) : Python, C++, Java, C#, NeuroBS Presentation software
Languages (human) : English, Mandarin Chinese, French, American Sign Language
Experience: LLMs, AI training, Data processing, Research, Data visualization, Teaching, Mathematics, Linguistics