

LU LIU

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EDUCATION

University of California, Santa Barbara

Expected September 2024

Cumulative GPA: 3.95

B.S. in Statistics and Data Science

Major GPA: 3.90

B.A. in Linguistics with Speech and Language Technologies emphasis

Major GPA: 4.0

PUBLICATIONS AND PRESENTATIONS

Peer-reviewed Proceedings

- Lai, R. K.-Y., **Liu, L.**, Yan, H., and DuBois J. W. (2023). From position to function: Exploring word distributions within intonation units in American English conversation. In Proceedings of the 27th Workshop on the Semantics and Pragmatics of Dialogue (SEMDIAL 2023 – Marilogue).

Conference Abstract and Poster

- Lai, R. K.-Y. and **Liu L.**. 2024. Noncanonical uses of similative demonstrative gam2 in conversational Cantonese and beyond. The 57th Annual Meeting of the Societas Linguistica Europaea. University of Helsinki, Finland.
- Lai, R. K.-Y. and **Liu L.**. 2024. Gam2-prefaced units in Cantonese interaction: Progression, mitigation, and insistence. The 27th Annual Conference on Language, Interaction and Social Organization. UC Los Angeles, CA.

Submitted

- Zhong, Y., **Liu L.**, and Brehm L.. The Processing Advantages of Emotion Words in L1 Speakers and L2 Speakers: A Meta-Analysis. Submitted to Bilingualism: Language and Cognition.

Data Session

- Lai, R. K.-Y. **Liu L.**. Gam2-prefaced units in Cantonese interaction: Progression, mitigation, and insistence. Language, Interaction, and Social Organization. UC Santa Barbara, CA.

RESEARCH AND PROJECT

Senior Thesis: Cantonese Tonal Coarticulation

January 2024 - present

Supervised by Prof. Matthew Gordon and Prof. Stefan Th. Gries

UCSB, Department of Linguistics

- Explored the effect of contextual tonal environment, lexical frequency, segmental makeup on the tones of target words according to F_0 changes.
- Trained customized Montreal Forced Aligner for Cantonese to perform the automated process of segmentation and corrected any misalignment manually.
- Utilized Python API *Parselmouth* to automate the process of F_0 extraction.
- Applied random forest modeling techniques to quantify the effects of coarticulation factors.

Historically Attested Phoneme Mergers Analysis

July 2023 - Present

Supervised by Prof. Simon Todd and Ph.D. candidate Chris Brendel

UCSB, Department of Linguistics

- Explored the relevance of syntactic and semantic factors to historically attested phoneme mergers in a number of different languages.

- Performed corpus data acquisition and preprocessing and utilized word2vec method in acquiring word vectors for similarity scores between minimal pairs.
- Performed PyTorch implementation of SGNS word2vec and developed regression model to predict phonemes mergers.

Usage of Discourse Marker *gam2* in Cantonese Interaction
Supervised by Ph.D. candidate Ryan Ka Yau Lai

October 2023 - present
UCSB, Department of Linguistics

- Investigated the multifunctional roles of the Cantonese discourse marker *gam2*, focusing on its usage in indicating progressivity, providing mitigation, and expressing insistence.
- Labeled and analyzed the function of each discourse marker*gam2* using transcription from HKCanCor according to the context.

Prosodic Profile Modeling
Supervised by Prof. John Du Bois and Ph.D. candidate Ryan Ka Yau Lai

September 2022 - present
UCSB, Department of Linguistics

- Developed Bayesian models to analyze the prosodic structure of speech, focusing on the intonation unit length containing the top 200 words and the position of those words in the Santa Barbara Corpus.
- Explored various distributions to best capture the variability and structure of word placement in natural speech.
- Interpreted posterior distributions to draw probabilistic conclusions about the prosodic patterns associated with high-frequency words

Child’s Emotional Vocabulary Acquisition
Supervised by Prof. Laurel Brehm and Ph.D. candidate Ashvini Varatharaj

January 2023 - June 2024
UCSB, Department of Linguistics

- Retrieved and cleaned data from Childes Corpus using using Python.
- Assisted in executing models to evaluate textual data and contributed to the development of data processing pipeline.
- Utilized OpenAI model to analyze the context of the emotional words being used by children.
- Participated in transcribing the audio of interviews of children.

A Meta-Analysis in The Processing Advantages of Emotion Words
Supervised by Prof. Laurel Brehm and Ph.D. candidate Yanlu Zhong

July 2023 - April 2024
UCSB, Department of Linguistics

- Participated in the examination and verification of the coding process of the meta-analysis to explore the differences in processing advantages of emotion words in L1 speakers and L2 speakers.

TEACHING EXPERIENCE

Tutor
University of California, Santa Barbara

June 2023 - March 2024
Campus Learning Assistance Services

- Provided drop-in tutoring sessions for statistics courses, assisting students with understanding and applying statistical concepts.
- Led group tutoring sessions, facilitating discussions and collaborative learning among students.
- Developed lesson plans and instructional materials tailored to individual student needs.

SKILLS

Technical Skills

Python, R, Praat, SAS, Microsoft Access, Latex, Excel, Eyetracking

Linguistic

Linguistics Analysis, Syntax, Morphology, Semantics, Corpus Linguistics, Phonetics, Phonology

Languages			
Mandarin Chinese	Native	Cantonese	Fluent
English	Fluent	Spanish	Beginner
Japanese	Beginner		