(JOJO)

PHD STUDENT LINGUISTICS & COGNITIVE SCIENCE

CONTACT

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Boston, MA, 02115

PROGRAMMING

Python, R, Git, JavaScript, HTML, MATLAB, Shell, CSS

STATISTICS

Hypothesis Testing Statistical Modeling Nonparametric Statistics

RESEARCH SKILLS

Controlled Experiments
Qualitative Interviews
Online Games
Functional Neuroimaging

PHD-LEVEL COURSES

Design of Experiments | 4.0 Psychological Statistics | 4.0 Intro to Bioinformatics | 4.0 Python for Bioinformatics | 4.0

LANGUAGES

English
Mandarin
Cantonese
Korean

SUMMARY

Accomplished researcher specializing in language learning across the lifespan, autism, and speech production. Proven ability to present research findings to diverse audiences through 5 top-tier journal publications and 11 conference presentations. Skilled programmer experienced in text analysis, speech decoding, and high-dimensional brain imaging data processing. Passionate about leveraging data-driven insights to solve complex problems. Seeking a data scientist internship to contribute to innovative data science projects.

PROJECT EXPERIENCE

Speech Analyses in Autistic Children

University of Delware, Newark, DE

- Developed and deployed innovative web-based audio recording software with JavaScript, enabling seamless collection of natural speech in 200+ participants' homes.
- Employed Python and R to conduct advanced text analyses on interview responses, unveiling common patterns and trends in children's descriptive terms.
- Automated analysis procedures using Python, implementing speech recognition algorithms to align sentences with phonemes, extracting pitch and formant values.

Natural Language Learning in the Social World

2019 - 2023

2020 - 2023

University of Delware, Newark, DE

- Led and executed a complex 3-year end-to-end production process for naturalistic story stimuli, encompassing script development, filming, editing, and finalizing video and audio materials.
- Leveraged jQuery to customize the web-based experimental platform, facilitating advanced randomization and eye movement recording during experimental tasks.
- Built an efficient workflow for analyzing web-based eye-tracking data, resulting in a 50% improvement in manual coding efficiency for eye gazes to social scenes.
- Engineered a robust analysis pipeline using high-performance computing platforms, automating object recognition in videos with the YOLOv3 algorithm from the imageAl library.

The Neurobiology of How Humans Learn to Speak and Write

2018 - Current

Graduated May 2018

Northeastern University, Boston, MA

- Conducted in-depth functional MRI data analyses and generated comprehensive visualizations of 3D brain data using Python, MATLAB, and Jupyter Notebook scripts.
- Developed and shared open-source online games using NodeJS for experimental purposes, fostering collaboration and advancing research in the field.
- Assessed domain-general cognitive abilities and pattern extraction skills across linguistic and nonlinguistic domains, auditory and visual sensory modalities in 300+ neurotypical children, adults, and autistic children.
- Employed functional magnetic resonance imaging (fMRI) techniques to scan, operate, and control MRI scanners, collecting 50+ children's brain imaging data.

EDUCATION

Ph.D. in Linguistics & Cognitive Science

M.A. in Linguistics & Cognitive Science

University of Delaware

Graduating May 2024

Graduated May 2021

University of Illinois Urbana-Champaign

B.A. in Linguistics & Cognitive Science, Summa Cum Laude

Unidel Distinguished Graduate Scholar Fellowship, 34k/Year, Newark, DE
Society for Language Development (SLD) Student Award, Boston, MA
Nov 2022
Gorilla Experiment Builder Grant (Spotlight Interview), 100 tokens, Online
Feb 2020
College of Arts and Sciences Graduate Student Travel Awards, 4.3k, Newark, DE
Outstanding Undergraduate Student in Linguistics, UIUC, Champaign, IL
May 2018
Dean's List, UIUC, Champaign, IL
August 2014 - May 2018