

# QI Yu

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## Education

**Zhejiang University**, B.A., English(Linguistics) Sept 2021–June 2025

- GPA: 3.94/4.00
- Coursework: Psycholinguistics (99), Introduction to Cognitive Neuroscience (95), Signals and Systems in Psychology (94), Elements of Bayesian Statistics (93), Modern Linguistics (93)

**Zhejiang University**, M.A., Linguistics 2025 Fall

- Concentrations: Neurolinguistics, Psycholinguistics
- Supervisor: Prof.YANG Jing

## Research Experience

**Research Center for Life Science Computing**, Zhejiang Lab

*Research Assistant* April 2024-present

Supervisor: Dr.LUO Cheng

- Currently working as an assistant on the project “Analysis of Human Auditory Cognitive Mechanisms and Evaluation of Brain-Like Performance in Auditory Models”
- 4th author of patent “Professional Domain Database Retrieval Method, Electronic Equipment and Media based on Knowledge Enhancement of Large Language Model”[基于大语言模型知识增强的专业领域数据库检索方法、电子设备、介质] (pending)
- Contributing to multimodal dataset development, including EEG, EOG, fMRI data acquisition from over 40 participants
- Utilized LM Studio for local model deployment, retrieved open-source models such as Qwen, Llama, and BAAI BGE from Hugging Face, interacted with the models via an API server, and completed tasks such as word embeddings extraction
- **Tools Used:** MATLAB, Psychtoolbox, EEG, fMRI

**Covid-19 English Neologisms Database Construction and Word-Formation and Semantics Studies**[基于语料库的新冠英语新词数据库建设及其构词和语义研究], Student Research Training Program (SRTP)

*Group Member (2-person team)* April 2023–April 2024

Supervisor: Prof.SHAO Bin

- **National level SRTP, granted highest level of SRTP funding**
- Collected 1,400 news articles related to COVID-19 from January 1, 2021, to June 30, 2023 and Used the NLTK and spaCy toolkits to process the texts and extract new words
- Created a neologism database that included information on usage frequency, domain of use, word formation process, definitions, examples, etc.
- Applied cognitive linguistics theories, such as Conceptual Integration Theory, to explore how the metaphorical and metonymic properties and polysemy of vocabulary reflect public perceptions and responses during the COVID-19 pandemic
- **Tools Used:** Python, SpaCy, NLTK

## Course Projects

**Functional Connectivity of resting state Language Networks in Patients with Autism Spectrum Disorders**

*Introduction to Cognitive Neuroscience* June 2024

- Used ABIDE-II datasets and pre-processed the rs-fMRI data of 48 participants (22 TCs and 26 ASDs); Selected

ROIs and conducted seed-based functional connectivity analysis with CONN

- Results showed significant differences in the left pSTG functional connectivity between the ASD group and the control group ( $p\text{-FDR} < 0.05$ ), ASD group exhibited atypical brain lateralization in the ASD group, supporting previous research findings
- **Tools Used:** MATLAB, SPM, CONN

**Does Interactional Context during Comprehension Modulate Bilingual’s Cognitive Control?**

*Psycholinguistics*

June 2024

- Adopted a dual-task paradigm proposed by Adaptive Control Hypothesis (ACH) that included a language comprehension trial to create the three interactional contexts (single language, dual language and dense code-switching) and a non-linguistic task (i.e., a non-verbal Flanker task)
- Coded the experiment using Psychopy and Collected behavioral data (RT and Acc) from 28 participants; Used repeated-measures ANOVA to analyze the Flanker Effect and overall RT across the three contexts
- **Tools Used:** Psychopy, SPSS

**Awards & Certifications**

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<b>Zhejiang University Third Prize Scholarship</b>	2024
<b>National Level Student Research Training Program (SRTP)</b>	2024
Granted the highest level of SRTP funding and recognized for outstanding project completion	
<b>Zhejiang University Global Engagement Program(GEP)</b>	2021
Honor Class of 2025	

**Skills**

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**Progamming:** Python(pandas, numpy, matplotlib, seaborn, sklearn, scipy), R, MATLAB, LaTeX

**Packages:** Psychopy, Psychtoolbox, Nilearn, SPM, CONN, JAGS (bayesian modelling)

**Methods:** behavioral; EEG(conducting and data anallysis);fMRI(conducting and data analysis)

**Languages:** Chinese(native), English(fluent), German(beginner)