

Shiyu He

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Summary

As a Research Associate at the University of Birmingham, I blend expertise in linguistics, eye-tracking research, and data analysis. I manage lab operations, train PhD students, and coordinate social events, highlighting my organisational and interpersonal skills. Pursuing a PhD in Applied Linguistics, I have a rich academic background with two master's degrees and a passion for language teaching and experimentation. My multicultural experiences and proficiency in diverse environments drive my commitment to collaborative research and continuous learning.

<https://outofourminds.bham.ac.uk/people/15>

Experience



Research Associate

University of Birmingham

Jan 2024 - Present (1 month)

Coordinated the establishment of a new lab, researching and referencing lab setups across the UK and EU. Assisted in designing and implementing our lab, incorporating best practices and innovative features.



Research Collaborator

University of Birmingham

Jun 2023 - Present (8 months)

As a Research Collaborator specializing in Linguistics and Eye-Tracking Technology, I partnered Professor Anindita Sahoo from Indian Institute of Technology Madras to support a study on Punjabi, an Indian language. My role involved providing extensive methodological assistance, encompassing the design of linguistically focused experiments and training in the use of eye-tracking equipment. I contributed to the development of surveys, the collection and analysis of linguistic data, and offered insights specific to the nuances of Punjabi. This collaboration is ongoing, with plans to co-author a research paper that encapsulates our combined expertise and the novel findings of our study in language and eye-tracking technology. My involvement has been integral from the experimental phase through to the analytical and writing stages, ensuring a comprehensive and in-depth exploration of Punjabi language processing.



Teaching Assistant

University of Birmingham

Nov 2023 - Dec 2023 (2 months)

1. Assisted in leading Data Mining workshops for undergraduates with Professors Petar Milin.
2. Prepared coding and data materials on Jupyter Notebook, focusing on R and Python for data mining instruction



Laboratory Manager

University of Birmingham

Sep 2022 - Dec 2023 (1 year 4 months)

Working for OOOMinds, a research project at the University of Birmingham [Out Of Our Minds \(bham.ac.uk\)](https://www.bham.ac.uk)

1. Lab Equipment Management: Ensured lab equipment was properly maintained and in optimal working condition.
2. Lab Setup: Organised and established a functional research lab environment.
3. Inventory Management: Developed and managed an efficient inventory system for lab equipment.
4. Lab Occupancy Coordination: Implemented a form to streamline lab usage scheduling for team members.
5. Training and Development: Delivered hands-on training to new PhD students in using specialised equipment like eye-trackers.
6. Technical Presentations: Presented detailed guidance on eye-tracker usage to department colleagues.
7. Interdepartmental Coordination: Facilitated equipment use and research collaboration across departments.



Research Technician

University of Birmingham

Sep 2022 - Dec 2023 (1 year 4 months)

1. Specialised in data preprocessing and wrangling using R, managing diverse data types including eye-tracking, Psychopy tasks, OpenSeasame tasks, Qualtrics surveys, interviews, and videos.
2. Undertook comprehensive data preprocessing tasks such as variable preparation, data merging, cleaning, and normalisation, readying data for modelling.
3. Performed descriptive data analysis, utilising R for preliminary analysis and creating reports and visualisations with R Markdown.
4. Independently conducted a study with 40 Chinese participants over two months, involving online grammatical judgement tasks in English. This encompassed theory comprehension, experimental design, participant recruitment, data analysis, and report writing.
5. Executed advanced statistical modelling, including PCA, cluster analysis, and linear mixed effects models with random effects, as well as Generalised Additive Models (GAM), for hypothesis testing and interpreting findings.
6. Assisted in organising references for the research team's papers using Endnote.



Research Associate

University of Birmingham

Mar 2023 - Oct 2023 (8 months)

1. Collaboration with Professor Aengus Ward: Engaged in a joint digital humanities project analysing medieval Spanish manuscripts through eye-tracking.
2. Study Design Involvement: Contributed to the initial study design and planning, focusing on pioneering methodologies.
3. Experimentation and Software Expertise: Devised and piloted eye-tracking experiments, demonstrating proficiency in specialised software.

4. Data Analysis Skills: independently undertook advanced data analysis, interpreting results from eye-tracking studies using descriptive analytics.
5. Academic Paper Co-authorship: Co-authored a research paper, submitted to a leading digital humanities journal in October 2023.
6. Diverse Skill Set: Displayed a range of skills including experimental design, programming, data collection, data analysis, statistical modelling, and academic writing.



Research Assistant

University of Birmingham

Apr 2020 - Jun 2020 (3 months)

IELTS Course Assistant

1. Course Development Support: Collaborated with Dr. John Goodyear, Lecturer in English as a Modern Foreign Language, in preparing IELTS courses tailored for international students.
2. Educational Content Creation: Jointly created a series of instructional IELTS preparation videos, which were hosted on the Canvas learning management system.
3. Video Production: Independently shot and produced a range of videos, focusing on IELTS preparation techniques and English learning skills, contributing to a comprehensive online learning experience.

Education



University of Birmingham

Doctor of Philosophy - PhD, Applied Linguistics

Sep 2019 - Apr 2024

My research investigates the eye movement behaviour of Chinese learners reading English, focusing on the adaptation challenges due to differences between Chinese and English orthography. Employing advanced statistical analysis, it explores how linguistic factors influence reading patterns, providing insights into bilingual reading strategies and cross-linguistic eye movement research.



Durham University

Master of Arts - MA, Language Interpretation and Translation

Sep 2015 - Sep 2016



Central China Normal University

Master of Arts - MA, Masters of Translation and Interpreting

Sep 2013 - Jun 2015

Skills

- University teaching
- Cognitive linguistics
- Eye-tracking
- Data Analysis
- Psycholinguistics
- Academic writing/researching