Yubin Hu

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Education

2020.9 – 2023.6

Beijing Language and Culture University (BLCU)
Master in Speech and Language Pathology

2016.9 – 2020.6

Southern Medical University (SMU)
Bachelor in Rehabilitation Therapy

Working and Research Experience

2025.7 – present

NeuraLight (Brain–Computer Interface Company)
Research & Development Specialist

- Designed and executed testing protocols to validate BCI hardware
- Developed hardware prototypes for neural signal acquisition
- Developed mobile apps for BCI data acquisition, visualisation, and control
- Collaborated with teams to integrate hardware and software for BCI systems
- Documented results and contributed to design iteration and improvement

2024.11 – 2025.6

Shenzhen University of Advanced Technology
Research Assistant (Principal Investigator: Yaqiong Xiao)

- Designed behavioural and cognitive assessments for children
- Preprocessed child MRI data and performed quality control
- Conducted fNIRS experiments and collected multi-modal (video, speech) data
- Performed standardised developmental assessments
- Processed and encoded speech data
- Performed encoding analysis linking fNIRS response to naturalistic movie stimuli
- Developed mobile-based parental questionnaires and training tools

2023.6 – 2024.10

Shenzhen Institute of Neuroscience
Research Assistant (Principal Investigator: Yaqiong Xiao)

- Preprocessed pediatric MRI data and performed quality control
- Recruited participants and coordinated imaging-based research protocols
- Developed user interfaces and digital content for public-facing health platforms
- Conducted statistical analyses on multi-modal neuroimaging data (MRI, fNIRS, EEG)
- Collected and preprocessed fNIRS and EEG data in child neuroimaging studies
- Prepared experimental stimuli and conducted cognitive and developmental assessments
- Designed cognitive training tools for memory, attention, and executive function
- Drafted and revised scientific and popular science content for publications

2022.6 – 2022.8

Chinese Institute for Brain Research
Intern (Principal Investigator: Joji Tsunada)

- Labelled vocalizations from marmoset audio recordings for neural-behavioural alignment
- Preprocessed ECoG data for neural signal analysis
- Supported cross-species neuroscience research

2021.10 – 2021.12

Speech Rehabilitation Center, School of Communication Science, BLCU
Intern

- Supported individualised therapy plans for children with hearing impairments
- Designed cognitive training games for children with autism spectrum disorder

2019.6 – 2020.4	**Yangzhi Affiliated Rehabilitation Hospital of Tongji University**

Intern

- Managed and tracked rehabilitation cases under supervision
- Supported physical, occupational, and speech therapy sessions
- Participated in interdisciplinary meetings for patient-centered treatment planning

Campus activities & Volunteer experience

2021.9 – 2023.6   **Language and Hearing Rehabilitation Volunteer Services, BLCU**

- Organised community-based public lectures to promote hearing health awareness
- Assisted with large-scale hearing screening services in community settings

2017.9 – 2019.6   **Rehabilitation Volunteer Services, SMU**

- Supported event coordination at rehabilitation facilities and academic outreach in rehabilitation sciences

Skills & Language

- **Programming:** Linux Shell, MATLAB, python, R, Eprime, PsychoPy
- **Brain Imaging/Temporal data analysis tools:** SPM, FreeSurfer, EEGLAB, HOMER, MNE
- **Other tools:** ELAN, Audacity, praat(basic)
- **Language:** English (IELTS 6.5); Mandarin (Native); Cantonese (Native)

Honors & Awards

2020, 2022   Academic Scholarship (Grade I), Beijing Language and Culture University

2021   Academic Scholarship (Grade II), Beijing Language and Culture University

2017   Excellent Student Cadre, Southern Medical University

Research Publications

Hu, Y., Huang, K., Xin, J., Zhang, S., Huang, Q., Yi, A., & Xiao, Y. (2025). Morphological features of language regions in children with autism spectrum disorder and varying language abilities. Psychiatry Research, 353, 116743. https://doi.org/10.1016/j.psychres.2025.116743

Su, C., **Hu, Y.**, Liu, Y., Zhang, N., Tan, L., Zhang, S., Yi, A., & Xiao, Y. (2025). Linking connectivity dynamics to symptom severity and cognitive abilities in children with autism spectrum disorder: An fNIRS study. Journal of Neuroscience. https://doi.org/10.1523/JNEUROSCI.0161-25.2025

Deng, L., Xu, M., **Hu, Y.**, Liu, Y., Chen, Z., Tan, H., Du, W., Xiao, Y., & Li, F. (2025). Assessing the Validity and Reliability of the Chinese Vineland Adaptive Behavior Scales for Children With Autism Spectrum Disorder Aged 1-6. Autism research : official journal of the International Society for Autism Research, 18(7), 1412–1430. https://doi.org/10.1002/aur.70045

Under Review   **Hu, Y.**, Zhang, N., Yi, A., Xiao, Y. (2024). Differential Neural Processing of Frequency and Duration Deviations in Children with Autism Spectrum Disorder and Associations with Language Exposure

Under Review   Yi, A., Huang, K., **Hu, Y.**, Zhang, S., Huang, Q., Xiao, Y. (2024). Altered white matter connectivity and associations with language abilities in young children with autism spectrum disorder.

Xiao, Y., Gao, L., **Hu, Y.**, & The Alzheimer's Disease Neuroimaging Initiative. (2024). Disrupted single-subject gray matter networks are associated with cognitive decline and cortical atrophy in Alzheimer's disease. Frontiers in Neuroscience, 18. https://doi.org/10.3389/fnins.2024.1366761

Xiao, Y., **Hu, Y.**, Huang, K., & Alzheimer's Disease Neuroimaging Initiative (2023). Atrophy of hippocampal subfields relates to memory decline during the pathological progression of Alzheimer's disease. Frontiers in aging neuroscience, 15, 1287122. https://doi.org/10.3389/fnagi.2023.1287122