

# Xinyu Wang

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## Education

Southwest University, BS in Applied Psychology	Sept 2022 – May 2026
• GPA: 4.3/5	
University of Texas at Austin, Psychology Summer Program	July 2023 – Aug 2023
• GPA: Full A	

## Research Interests

- Music Cognition, Auditory Perception, Speech Perception, Mental Health

## Skills

**Programming:** Matlab, Python(web development,deep learning frameworks and PsychoPy), E-Prime

**Data analysis:** Python(MNE, Nexus, Neurokit2), Matlab(EEGlab, FieldTrip and SPM), R Studio, SPSS

**Methods:** EEG, fMRI, fNIRS

**Audio:** Python(Librosa, Madmom), FL studio, Audacity, Logic Pro, Spleeter

## Research Experience

<b>Research Intern</b> , Music, Brain and Health Lab, Psychiatry and Behavior Science, Stanford University	July 2025 – now
• <b>Advisor:</b> Dr.Daniel Bowling, <b>Assistant Professor</b>	
• Leader of a EEG project on Effects of Musical Harmony on Neural Synchrony and a pilot study on How Tempo Change affect music-brain synchrony.	
• Creating the experiments protocols.	
<b>Research Assistant</b> , University of Pennsylvania	Nov 2024 – now
• <b>Advisor:</b> Dr.Tao Lin, <b>Instructor</b>	
• Screening and correlation analysis of articles related to network meta-analysis, systematic reviews, writing meta-analysis protocols.	
<b>Research Assistant</b> , Liuying Lab, Southwest University	Feb 2025 – now
• <b>Advisor:</b> Dr.Ying Liu, <b>Associate Professor</b>	
• Assisted in an EEG study on the effect of music speed on driving emotions, responsible for data collection and preprocessing.	
<b>Research Assistant</b> , Institute of Psychology, Chinese Academy of Science	Aug 2024 – Jan 2025
• <b>Advisor:</b> Dr.Yi Du, <b>Professor</b>	
• Cooperated with doctoral student, to understand the role of the temporoparietal junction and insular cortex in music reward.	
• Programming,data collection,audio editing and data analysis	
<b>Surveyor</b> , CIEFR, Peking University	Nov 2024 – Dec 2024
• <b>Advisor:</b> Xinjie Zhang, <b>PhD Candidate at Vanderbilt University</b>	
• Data collection and verification in Yunnan Province, China, and fulfillment of related logistics, school communication, etc.	
<b>Student Researcher</b> , Southwest University	Dec 2022 – Nov 2024
• <b>Advisor:</b> Dr.Youguo Chen, <b>Associate Professor</b>	

- Carry out research projects as a lead researcher, investigate very short time-distance automatic and controlled processing interactions.
- Programming, data analysis

## Projects

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### Effects of Musical harmony on Neural Synchrony: An EEG Study

- Using ten music with almost same tempo(2Hz), and modulate into three superposition version(better and worse version) by Audacity, collecting subjects tapping synchrony to the beats and EEG data, then using Temporal Response Function to test the music-brain synchrony.

### EEG Signatures of Perceptual Curiosity: Interactions between Information Presentation and Sound Ratio

- Funded by Chongqing Municipal Undergraduate Innovation and Entrepreneurship Training Program, this study aims to use EEG technology, this study employed a keypress-sound paradigm to investigate the differences and neural mechanisms of perceptual curiosity under information  $\times$  valence conditions.

### An EEG study on how music speed affects driving emotions

- Responsible for managing the appointment, writing experiment programs with Matlab PTB, and data collection, preprocessing the collected data, and conducting ANOVA analysis.

### Network Meta-Analysis of Guided and Unguided Self-Help Interventions for Anxiety and Depression

- Conduct a network meta-analysis of randomized controlled trials comparing the efficacy of guided vs. unguided self-help psychological interventions for adults with anxiety, depression, and OCD. Aimed to identify evidence-based, scalable approaches for improving mental health outcomes.

## Publications

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### Interaction Between Automatic and Controlled Processing in Subsecond Duration Perception: An ERP Study(In preparation)

- Xinyu Wang, Youguo Chen.

## Honors and Awards

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Southwest University Overseas Study Scholarship	2025
Southwest University Spiritual Civilization Award	2025
Chongqing Municipal Undergraduate Innovation and Entrepreneurship Training Program	2024
Southwest University Cultural and Artistic Activity Award	2024
Hanhong College Special Scholarship	2023
The 36th China Chemistry Olympiad First Prize in Shandong Province	2022