

Yao Xiao

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EDUCATION

Indiana University, Bloomington

Ph.D. in Developmental Psychology and Cognitive Sciences

Advisor: Dr. Emily Fyfe

Bloomington, IN
Anticipated 06/29

Northwestern University

Bachelor of Arts in **Psychology, Mathematics, and Radio/TV/Film**

Cumulative GPA: **3.976/4.00**

Relevant Coursework: Learning, Representation, and Reasoning; Analogy and Similarity; Research Methods in Psychology; Consciousness; Brain Damage and the Mind; Perception; Using R for Analysis; Probability and Stochastic Processes; Real Analysis

Evanston, IL
06/2024

Honors Thesis: "Improving Students' Ability to Analyze Scientific Analogies", advised by Dr. Dedre Gentner

RESEARCH INTERESTS

Insight; Creativity; Mathematical Thinking; Analogical Reasoning; STEM Education

RESEARCH EXPERIENCE

Creative Brain Lab, Psychology Department, Northwestern University

Project Lead | Advisors: Dr. Mark Beeman and Dr. Yuhua Yu 01/2022 – 06/2024

- Led an innovative research project on the role of insight, or "Aha" moment, in mathematical problem-solving under supervision.
- Selected materials, designed the experiment, and analyzed both quantitative and qualitative data from over 40 participants for the project.
- Advanced the understanding of insight in real-life problem-solving, as well as the mental mechanisms behind mathematical thinking by studying math and psychology interdisciplinarily.

Cognition and Language Lab, Psychology Department, Northwestern University

Project Lead | Advisor: Dr. Dedre Gentner 09/2023 – 06/2024

- Designed a study exploring the possibility of using scaffolds, or templates, to facilitate analogical reasoning and learning in STEM disciplines, specifically biology.
- Conducted the study and relevant data analysis, and wrote an honors thesis paper on the results.

Research Assistant | Advisor: Dr. Dedre Gentner 07/2022 – 06/2024

- Contribute to material selection, experimental design, and data analysis for two research projects on analogy training for promoting science learning funded by National Science Foundation.
- Analyze qualitative data for several projects on analogical thinking.

Adolescent Development and Preventive Treatment Lab, Psychology Department , Northwestern University

Research Assistant | Advisor: Vijay Mittal

12/2021 – 09/2022

- Collaborated with a team of researchers to support various psychosis prevention studies by coding and analyzing qualitative data.

CONFERENCE PRESENTATIONS

“Improving Students’ Ability to Analyze Scientific Analogies.” Poster presented at the Northwestern Undergraduate Research Expo, Evanston, IL, May 2024.

[“The Role of Insight in Mathematical Problem-Solving.”](#) Poster presented at the Northwestern Undergraduate Research Expo, Evanston, IL, May 2023.

“The Role of Insight in Mathematical Problem-Solving.” Oral presentation at the Chicago Area Undergraduate Research Symposium, Chicago, IL, April 2023.

[“The Role of Insight in Mathematical Problem-Solving.”](#) Poster presented at the 95th Annual Meeting of the Midwestern Psychological Association, Chicago, IL, April 2023.

HONORS AND AWARDS

Dean’s List, Northwestern University, 2020-2023.

Advanced Academic Year Research Grant, Northwestern University, December 2023.

2nd Place – Social Sciences for poster presentation at the Northwestern Undergraduate Research Expo, Northwestern University, May 2023.

Top Oral Presenter at the Chicago Area Undergraduate Research Symposium, April 2023.

Office of Undergraduate Research - Cognitive Science Program Summer Undergraduate Research Grant Award, Northwestern University, April 2023.

Academic Year Research Grant, Northwestern University, December 2022.

Award for Excellence in Mathematics By a First Year, Northwestern University, March 2021.

WORK EXPERIENCE

Mathematics Department, Northwestern University

09/2022 – 06/2024

Teaching Assistant

- Led weekly discussion sections for undergraduate-level math classes to help the students solidify what they learn in class.
- Held two hours of office hours per week to answer questions about the class in general, assignments or exams.
- Graded weekly assignments and exams.

**Northwestern Emerging Scholar’s Program, Mathematics Department,
Northwestern University**

Peer Mentor

09/2022 – 06/2024

- Guided weekly sessions where students work together on worksheets that offer a taste of a particular mathematical topic.
- Introduced upper-level mathematics to interested undergraduates in an accessible and stakes-free manner.

University Library, Northwestern University

Security Aide

03/2022 – 12/2023

- Provided customer service to library visitors, assisting in Library operational tasks, and upholding library policies.
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LEADERSHIP EXPERIENCE

Muhe Mental Health Support Group

Peer Mentor

09/2023 – 01/2024

- Talked with peer international students about their concerns about school life, family and social relationships, future career choice, etc., through biweekly zoom meetings.
- Provided company and emotional support for peers.
- Received a five-week professional training session on psychological counseling skills.

Virgin, F, 21

Animation Director

02/2023 – 06/2023

- Directed the animation parts, comprising approximately 1 minute in duration of a student short film, which explored the intersection of femininity and Asian culture and was funded by the Studio 22 Bindley Grant of 5000\$.
- Drafted the majority of storyboards, providing the visual roadmap for the animation segments.
- Collaborated with another animator to execute the coloring and animation.

Book & Breakfast

Volunteer & Tutor

09/2022 – 03/2023

- Offered emotional and social support to Evanston elementary school students in racial minority and socioeconomics disadvantages.
- Helped the students academically, often with their homework, or reading books.

Northwestern University Chinese International Student Association (CISA)

President's Secretary

07/2021 – 06/2022

- Coordinated the collaboration among different departments and organized cultural events to bond Chinese international students.
- Hosted groups meetings, together with the president.

Marketing Junior Executive

09/2020 - 06/2021

- Managed social media accounts for CISA to promote the public image of the student association.
- Organized and marketed activities including the largest debate competition among Chinese international students in the US.

Photography We-media

Initiator

08/2015 - Present

- Got into the international winner list (9 out of 2200) in New York Times Teenage Photography Contest themed "Show Us Your Generation" by my work— "Dancing Against Formulas".

- Manage a microblogging account on Lofter with over 500 followers which received over 10,000 likes.
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SKILLS

- **Computer/Softwares:** R Studio; SPSS; Multiple Adobe Creative Applications
- **Language:** English, Mandarin