

EDUCATION

Vanderbilt University

Ph.D. student in Neuroscience

Nashville, TN

Start from: Sep, 2022

University of Rochester

Honors Bachelor of Science in Brain & Cognitive Science

Bachelor of Science in Computer Science

Rochester, NY

May, 2022

- Overall GPA: **3.92**
- **Dean's List** for all eligible semester
- College Honor: *Magna Cum Laude*

GRADUATE RESEARCH EXPERIENCE

Vanderbilt University

Rotation in Dr.bThilo Womelsdorf's lab

Nashville, TN

September 2022 - Present

- Developed 3D stimuli generation toolbox using Blender and made it open-source for the community
- Participated in the development of a new software platform for animal cognition studies

Vanderbilt University

Colaboration with Dr. Catie Chang & Dr. Alex Maier

Nashville, TN

January 2023 - Present

- Testing Integrated Information Theory (IIT) using EEG, fMRI and neuronal data
- Collaborating with interdisciplinary researchers to investigate collective intelligence

UNDERGRADUATE RESEARCH EXPERIENCE

University of Rochester

Honors Thesis under Dr. Ralf Haefner

Rochester, NY

September 2021 - May 2022

- Conducted psychophysics experiment using a visual discrimination task to study how perceptual decision-making adapt to new visual information.
- Extended previous research about the approximate hierarchical inference model.
- Analyzed behavioral data using logistic regression and gamma regression models in MATLAB.
- Poster presentation on Visual Science Society(VSS).

New York University, Shanghai Campus

Research Assistant under Dr. Jeffery Erlich

Shanghai, China

August 2020 - July 2021

- Developed Python script which monitors daily weight changes of lab animals and sends out warnings to experimenters via email and app notification.
- Constructed and analyzed multiple neural networks to simulate rat's behavior in an ongoing experiment, which included CNN and RNN.
- Designed a new cage-monitoring system to track animal movements using raspberry pi and 3D printing.
- Learned to take care of lab animals and collect electrophysiological data from rats, assisted animal surgery.

University of Rochester

Independent Research under Dr. Martina Poletti

Rochester, NY

September 2018 - March 2020

- Conducted research project on the trade-off mechanism behind visual endogenous attention.
- Learned how to set up and operate the eye-tracking machine, wrote C++ code to run the experiment.
- Presented poster on Undergraduate Research Expo in University of Rochester (Spring 2019).
- Collected over 12,000 trials across 6 subjects and analyzed data using R and MATLAB.

CONFERENCE & PREPRINTS

- **Xuan Wen**, Ankani Chattoraj, Ralf Haefner. Investigating limits and time scales of a perceptual confirmation bias *Visual Science Society*, 2022.
- Yipeng Zhang, Tongyu Yang, **Xuan Wen**. Evaluating Object Proposal-based and Multi-Scale Fusion-based Methods for Actor- Action Classification on Still Images. *Part of the Actor-Action Video Classification CSC 249/449 Spring 2020 Challenge Report, ArXiv preprint*, 2020.
- Yen-Chen Hao, Chung-lin Yang, **Xuan Wen**. The Effect of Grapheme-Phoneme Correspondence on Mandarin Word Learning. Poster Presentation on the Acoustical Society of America, 2020 (cancelled due to the pandemic)

TEACHING EXPERIENCE

NSC-3630: Durges & Behavior

Spring 2023

Graduate TA under Dr. Meredith Wegener

SKILLS

Coding

- **Programming Languages** - Python, Java, C, C++, MATLAB, R, SQL, GO
- **Toolboxes** - PyTorch, Tensorflow, PsychToolbox, PsychoPy, LaTeX
- **Software** - Adobe Illumination, Sketch-up, Blender
- **Web Client Development** - HTML, CSS
- **Hardware & Infrastructure** - Cloud service providers including GCP, Raspberry PI, Arduino

Animal Facility

- Handling lab animals including rats, mice and macaques
- Assisting electrophysiological surgery

General

- **Language Skills** - Native Mandarin Chinese speaker, fluent in English, entry-level Japanese
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