

# Sharon Wong

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## EDUCATION

### Bachelor of Arts in Computer Science & Neuroscience

May 2025

Earlham College | Richmond, IN | Majors GPA: 4.00

## LAB & TECHNICAL SKILLS

*Programming:* Python, R, Matlab, SQL, Markdown, Image J

*Wet Lab:* Microtome, Leica Microscopy, Rats/Mice handling, IR Spectroscopy, Gel Electrophoresis, Protein Purification, Titration, Bradford Assays, DNA Extraction, Western Blot, SDS-PAGE, CRISPR, Micropipette

*Language:* Mandarin (Native), English (Proficient)

## RESEARCH EXPERIENCE

### Research Assistant

Department of Computer Science, Earlham College | Richmond, IN

Jan. 2023 – Present

*Under Dr. Sofia Lemon*

- Conducting Efficient Limited Memory Heuristic Search Planning by Slurm, Python, matplotlib, and pandas.
- Investigating shortest path planning algorithms for problem-solving in grid maps, puzzle games, and routing deliveries, focusing on memory-efficient and computationally efficient representations
- Implementing existing heuristic search algorithms such as beam search and explored new problem domains

### Research Assistant

Department of Physics, Earlham College | Richmond, IN

Aug. 2022 – Present

*Under Dr. Micaehel Lerner*

- Conducting a computational analysis of the Twist 1 gene network by Python and Ipycytoscape for graphing.
- Creating weighted protein interaction nodes and observing their effects on the overall network simulation.
- Storing 7000 interaction data points into networks of ProteinProtein interact and ProteinTransferfactor interact.

### Research Assistant

June – Aug. 2022

STARK Neuroscience, IUPUI | Indianapolis, IN

*Under Dr. Yadav P. Amol*

- Trained 10 rats with spinal cord electrodes to complete operating, detection, and discrimination tasks successfully in the behavior boxes.
- Performed MATLAB programming behavior task and analyzed the data, e.g., receiver operating characteristic curves.
- Identified that rats are able to discriminate artificial sensations in aperiodic and periodic spinal cord stimulation.

### Research Assistant

Aug. 2020 – June 2021

Institute of Brain Science, National Yang-Ming Chiao Tung University | Taipei, Taiwan

*Under Dr. Shih-Chieh Lin*

- Assisted lab with pre-processing procedures, including mice perfusion, section, embedding, and microtome of mice brains.
- Set up the Leica microscope in order to investigate the mice basal forebrain histology of brain tissues.
- Responsible for overall health of the mice colony, including feeding, tracking weight changes, and cleaning habitats in cages.
- Tabulated data in excel based on the information collected from the mice brains.

## PRESENTATION HISTORY

Jui H. Wong & Amol P. Yadav (2022, July 26). *Studying discrimination of artificial sensations induced by aperiodic spinal cord stimulation in rodents* [Poster presentation]. Stark Neuroscience Symposium 2022, Indianapolis University School of Medicine, Indianapolis, IN, United States.

(2022, Oct. 14) EPIC Expo, Earlham College, Richmond, IN, United States.

## PROFESSIONAL EXPERIENCE

### Teacher Assistant in Research Methods & Statistics

Department of Psychology, Earlham College | Richmond, IN

Jan. 2023 – Present

- Assessing students assignments and furnishing them with constructive feedback for their betterment.
- Instructing students in the art of programming using languages such as R and Java.

### Pre-Health Peer Mentor

Aug. 2022 – Present

Center of Global Health, Earlham College | Richmond. IN, USA

- Organizing National Public Health Week, which included collaborate with Richmond Farmer Market and Richmond Health Fair.
- Organized National Health Professions Week, which included daily events and workshops.
- Provide students' with feedback on crafting resumes, CVs, and cover letters through individual appointments.

### Resident Assistant

Aug. 2022 – Present

Office of Residence Life, Earlham College | Richmond. IN, USA

- Enforce college policies and ensure a healthy and safe living environment for 32 undergraduate students.
- Serve on-call two nights per week and respond to crises and emergency situations.
- Create and implement 2 community events per month to increase social interactions.

### IT Service Assistant

Aug. 2021 – Present

Office of Information Technology Services, Earlham College | Richmond. IN

- Provide primary support for hardware and software on, or connected to, college-owned computing equipment.
- Assist in installing, configuring, and supporting new Windows and Macintosh-based hardware and software as needed.
- Assist in developing training material for other student workers to follow in future semesters.

### Biology Stockroom Assistant

Feb. – May 2022

Department of Biology, Earlham College | Richmond. IN

- Constructed laboratory apparatus for biology instruction and experimentation.
- Maintained stock and replenished laboratory supplies and prepared solutions.
- Communicate effectively with staff and students and animal care daily.

## LEADERSHIP EXPERIENCE

### Secretary, Google Developer Student Club

Aug. 2022 – Present

Earlham College | Richmond. IN, USA

- Coordinate and track club correspondence to increase efficiency in communication.
- Maintained official records of meetings by informing officers of report deadlines, mailings, and future commitments.

### Volunteer, Giving Daily Needs Program

Aug. 2018 – May 2019

Red Cross | Dilijan, Armenia

- Increased club membership from 10 to 25 by sharing experiences and preparing items for the daily needs of senior citizens.
- Donated items for daily needs to the Dilijan community center and conducted home visits to seniors every 2 weeks.
- Explored and created more opportunities to connect with the local community.

## CAMPUS INVOLVEMENT

### Member, Minority Association of Pre-Medical Students

Aug. 2021 – Present

Earlham College | Richmond. IN

- Biweekly meetings to discuss minorities in the medical pathway obstacle and how to overcome it, and different workshops to explore future careers and goals.
- Attended the blood test workshop to learn distinct components with unique functions and divided into different groups of blood types; I also checked my blood type and helped other students do the same.

**Health Externship Program - Job Shadow**

Jan. – May 2022

Whitewater Eye Center Richmond | Richmond. IN

*Under Dr. Judy D. Risch, O.D.*

- Conducted pre-eye exams, including using Intraocular pressure (IOP).
- Developed a better understanding of the ZIESS to scan the optical fiber and compared ordinary optical nerve fiber to the damaged nerve thread.

**Member, EC Hackers**

Feb. – May 2022

Earlham College | Richmond. IN

- Design marketing materials and T-shirts for relevant events.
- Planned Tech week and took notes in weekly meetings for discussion of code.

**Member, Women's Basketball Team**

Sep 2021 – May 2022

Earlham College | Richmond. IN

- NCAA (HCAC) DIII, Forward Position