

Shipei Huang

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EDUCATION

University of Washington, Seattle, WA

B.S./M.S. (Combined) in Bioengineering: Data Science Option (with Honors); CGPA 3.80/4.0

Sep 2020 – Present

Bachelor of Science in Economics (with Honors); Econ Major GPA:3.88, CGPA 3.80/4.0

Sep 2020 – Jun 2025

SKILLS

Programming: Java, Python, MatLab, Stata, Rstudio, Arduino, Machine Learning (Intro), Web Design (UI)

Modeling: COMSOL (Biophysics simulation), SelfCAD (3D Printing)

Wet Lab: qPCR, Western Blotting, DNA Purification, Confocal (Brain imaging)

Focus Areas: Data Analysis (Quantitative), Financial Economics, Macroeconomic Policy, Game Theory

ACADEMIC EXPERIENCE

Independent BioEn Research (Honors Program and Master Program)

Feb 2024 – Present

Supervised by Prof. Christopher Neils, Prof. Yijie Geng, and Prof. Wendy Thomas

- Developed an Arduino-based system for behavioral conditioning in zebrafish and a pipeline for automated data collection and data analysis of behavioral responses across training phases.
- Programmed in Arduino IDE (C++) for hardware control and Python for video tracking and data analysis; Built 3D modeling in SelfCAD

Independent Econ Research (Honors Program)

Mar 2024 – Jun 2025

Supervised by Prof. Quan Wen

- Applied evolutionary game theory and Rank-Dependent Expected Utility (RDEU) modeling to examine and simulate emotional strategy dynamics between vehicle owners and enforcement officers in parking compliance.
- Focused on symbolic computation, numerical simulation, and stability analysis techniques in MATLAB to study the decision-making process of drivers and enforcement officers.

Research Assistant in Geng Lab (Full-time Summers; Part-time Academic Year)

Apr 2023 – Jun 2025

Supervised by Prof. Yijie Geng, Alex He (Ph.D. student), and Dr. Ping Zhang

- Built a 3D digital atlas of the adult zebrafish brain using tissue clearing, antibody staining, and confocal microscopy
- Investigated zebrafish embryo tolerance to extreme G-force by applying graded centrifugal stress across developmental stages; conducted survival analysis and post-exposure drug screening to explore underlying molecular mechanisms

Teaching Assistant

Teaching assistant to Prof. Fabio Ghironi (Econ 401 & 425) - Holding review session for exams; Q&A session

Grader for Prof. Quan Wen (Econ 400) - Grading homework, quizzes, exams; Q&A

• Econ 401 (Advanced Macroeconomics)

Spring 2025

• Econ 400 (Advanced Microeconomics)

Autumn 2024

• Econ 425 (Monetary Economics)

Autumn 2024

PUBLICATIONS

Conference Title

Place Holder (will be replaced in August)

WORK EXPERIENCE

Applied Data Scientist Intern | Uwise Edu | Guizhou, China

Aug - Sep 2023

- Designed and launched an educational platform (front-end) delivering paid tutoring and free academic support to students.
- Designed a content-based recommender system using matrix factorization to improve user retention and course enrollment by over 13.47%

Dining Services | University of Washington | Seattle, WA

Winter 2022

- Provided catering services in a high-volume university kitchen, including food prep, dishwashing, and cashier duties during campus events.

ADDITIONAL ACTIVITIES

Undergraduate Peer Mentor | UW Neurobiology Club | Seattle, WA.

Spring 2023

- Advised prospective mentees exploring academic and research pathways in neuroscience. Led mentorship activities to foster inclusive engagement in STEM.

Animals Rescue Volunteer | Panda Conservation Research Center | Sichuan, China.

Jun 2019

- Investigated the living habitats of wild panda; Earned - "Wild Animal Conservation Award" - for the contribution in panda conservation and research during the entire month

STEM Competition Summer Camp | UNESCO | Hood College, Frederick, MD

Jun 2018

- Earned second place in a robotics programming competition organized by UNESCO (United Nations Educational, Scientific and Cultural Organization)