

Shipei Huang

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EDUCATION

University of Chicago

Master of Arts in Social Sciences - Political Economy
(Scholarship Package: \$ 40,000)

Aug 2026 – Present

University of Washington

Master of Science in BioEngineering (Research Master); GPA 4.00/4.0

Jul 2025 – Jun 2026

Bachelor of Science in BioEngineering - Data Science (**with Honors**); GPA 3.80/4.0

Sep 2020 – Jun 2025

Bachelor of Science in Economics (**with Honors**); GPA 3.80/4.0

Sep 2020 – Jun 2025

Skills: Python, Stata, Rstudio, Microcontroller (C++), Machine Learning, Web Design (UI)

RESEARCH INTERESTS

Macroeconomics, Political Economics, Health Economics, Game Theory, Monetary Economics

PUBLICATIONS AND PREPRINTS

A Programmable Conditioning Arena for Zebrafish Learning and Memory Studies

Shipei Huang, Alex He, Yijie Geng (2026)

Preprint: bioRxiv. Under Review.

PI3K/AKT/mTOR/Rac1-dependent Resistance to Extreme Hypergravity

Ping Zhang, Charles Zhou, Shipei Huang, Rose Meyer, Freya Peng, Yijie Geng (2026)

Journal: Science Advances. Status: To Revision.

RESEARCH EXPERIENCE

Honors B.S./M.S. in BioEngineering Research (Fully Funded by Geng Lab)

Feb 2024 – Jun 2026

Title: Teaching Fish to Learn: Building a Stimulus Arena for Zebrafish Conditioning Experiments

Supervised by Prof. Christopher Neils and Prof. Yijie Geng

- Developed an Arduino-based system (C++) for behavioral conditioning in zebrafish and a pipeline for automated data collection and data analysis of behavioral responses across training phases.

Independent Econ Research (Honors Thesis)

Mar 2024 – Jun 2025

Title: Urban Parking Decisions Under Emotion: A Game-Theoretic Approach

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. Simulations proved that a small but positive patrol probability can sustain high levels of compliance.

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

Apr 2023 – Jun 2025

Projects: Brain Imaging; Proteins Quantification; Survival Analysis

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 and conducted drug screening survival analysis to explore underlying molecular mechanisms.

TEACHING EXPERIENCE

Teaching Assistant (TA) / Instructional Grader at University of Washington

TA to Prof. Fabio Ghironi (Econ 401 & 425) - Holding review session for exams; Attending lectures

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

- Econ 401 - Advanced Macroeconomics (TA)
- Econ 400 - Advanced Microeconomics (Grader)
- Econ 425 - Monetary Economics (TA)

Spring 2025
Autumn 2024, Autumn 2025
Autumn 2024

CONFERENCE AND PRESENTATIONS

Western Economic Association International (WEAI) Conference | Bangkok, Thailand Apr 2026

Paper: Urban Parking Decisions Under Emotion: A Game-Theoretic Approach

- My research (Econ Honors thesis) on urban parking compliance under emotion was submitted and accepted by the 18th WEAI conference. I presented and shared my research findings in this conference this April.

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%

SERVICES AND 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)