

# Wanjia Fu

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## EDUCATION

### Brown University

Providence, RI | **Expected Graduation May 2026**

*Expected Sc.B in Computer Science and A.B in Mathematics*

• Relevant Courses: (*grade: A*): Learning and Sequential Decision Making, Deep Learning, Computer Vision, Computer Graphics, Introduction to Software Engineering (*grade: S\**), Introduction to Computer Systems, Applied Statistics in Python, Operations Research, Computational Probabilities and Statistics, Abstract Algebra, Honors Linear Algebra, Applied Partial Differential Equations, Applied Ordinary Differential Equations; (*expected grade: A*): Computer Networks, Design and Analysis of Algorithms

## INTERNSHIP & ON CAMPUS EMPLOYMENT

### Hydsoft Technology Co. Ltd., *Product Operation Intern*

Shanghai, China | **May 2023 - Jun 2023**

- Designed AI customer service to improve plane ticket booking system based on Baidu UNIT and natural language processing
- Designed front-end poster layout and user interface in a 10-member team for China Mobile Smart Card Production Platform
- Received the PaddlePaddle AI Technical Engineer Certificate as Intelligent Customer Service Engineer by Baidu AI Cloud

### Pinhole Camera Models, *Software Engineering Intern at Brown Visual Computing*

Providence, RI | **June 2023 - Aug 2023**

- Employed front-end and back-end development with Three.js, Javascript, HTML, and CSS to create an online website tutorial on camera projection and perspective projection for the class Computer Vision for Dr. James Tompkin
- Improved upon two existing online tutorials on affine transformations and the fundamental matrix for course development

### Brown Computer Vision, *Undergraduate Teaching Assistant; Head Teaching Assistant*

Providence, RI | **Jan 2024 - Dec 2024**

- Work as one of the 24 undergraduate teaching and later one of the two head TAs for the class CSCI 1430 Computer Vision
- Helped design and develop course material, improved its webpage on a biannual basis, managed organization Github repository, upgraded Gradescope autograders, maintained and managed assignment code management
- Graded and attended TA Hours and ED Hours for projects on image filtering, feature matching, camera geometry, scene classification, convolutional neural network, and a computer vision final project

## RESEARCH & PROJECTS

### Vibration Haptics, *Research Assistant at Brown Interactive 3D Vision & Learning Lab*

Providence, RI | **Jan 2024 – now(ongoing)**

- Designed portable wrist hardware device containing with Inertial Measurement Unit (IMU), using which to collect hand object contact sensor and visual data
- Preprocessed RGB camera data with MANO fitting pipeline to obtain pose estimation results and contact heatmap, built a neural network to improve hand-object contact detection and localization
- Integrated IMU sensor and its data visualization into Brown Interaction Capture System (BRICS), participated in the hardware assembling and software calibration for the room-sized capture studio with professor Dr. Srinath Sridhar

### Shape-Based Skill Transfer, *Research Assistant at Intelligent Robotics Lab*

Providence, RI | **Aug 2023 – Aug 2024**

- Learned latent representations of object parts for mugs and spatulas to carry out pouring and scooping tasks, and tried to learn a robust skill for all shapes of the same object category, with advisor Dr. George Konidaris
- Worked on ROS and reinforcement learning, Boston Dynamics Spot robots, and KUKA robotic arms with radar cameras

### Restaurant Recommendation WebApp with Blog Posting Functionality

Providence, RI | **Mar 2023 – May 2023**

- Built React WebApp that recommends restaurants based on labels input by the user using Figma and Python as backend
- Mocked data in the backend including user and post id, restaurant labels, and user reviews using Firebase
- Designed and implemented front-end functionalities to allow users to post blogs about their experience and recommendation

## SKILLS & INTERESTS

**Technical Skills:** (fluent) Python, HTML, CSS; (experience) Java, C++, C, Typescript, Javascript, WebGL, OpenGL, Go Lang, React

**Language:** Trilingual proficiency in English, Spanish (Awarded C1 by El Instituto Cervantes), Chinese

**Interests:** Semi-professional Chinese traditional dance, piano, taekwondo, novel writing, painting, drums, guitar, and tennis

## ACTIVITIES & LEADERSHIP EXPERIENCE

### Brown IgniteCS, *Member*

Providence, RI | **Sept 2023 – May 2024**

- Designed and developed a series of courses related to AI and taught as guest lecturer at Nathanael Greene Middle School
- Designed and developed the coding club on HTML, CSS at the Sophia Academy coding club for 1.5 hours per week

### Brown Moli East Asian Dance Company, *Co-Secretary Chair; Co-Director*

Providence, RI | **May 2022 – now(ongoing)**

- Prepare for annual spring show, teach Chinese dances, organize rehearsals logistics, communicate with financial supervisors