ZIQI (ODYSSEUS) SHEN

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Adaptable to new skills in a fast-paced R&D context; Passionate about tackling difficult problems ingeniously

EDUCATION

Brown University, *Sc.B. Cognitive Neuroscience, Sc.B. Computer Science Candidate* **Expected May 2027**

- **GPA:** 3.8
- **Coursework:** Algorithms; Systems; NeuroAI; Computer Vision; Abstract Algebra; Statistics; Information Theory; Electrical Circuits & Signals; Computational Neuroscience; Memory & Hippocampus; Neurobiology
- **Awards:** Undergraduate Teaching and Research Award (Summer 2025)

Shanghai Pinghe School, *International Baccalaureate Diploma* **Sep 2020 – May 2023**

- **IB Final Grade:** 44/45 (6 Higher Level Courses: Physics, Biology, Math AA included)

RESEARCH

BrainGate, Brown University's Brain-Computer Interface Lab **May 2025 – Present**
Research Assistant Providence, RI

- During summer 2025, Developed a Unity-based software testing environment enabling real-time neural signal control of a soft robotic arm for participants with tetraplegia; Refactored a 1,600-line C# codebase into two modular, well-structured files within three weeks, improving readability, maintainability, and extensibility
- Expanded system functionality by increasing the degrees of freedom available for assistive movement
- Learned Blender in one day to modify and optimize 3D avatar assets required for experimental visualization
- Currently performing feature extraction on intracortical neural recordings to support decoder evaluation

Brown University Favila Lab **Dec 2024 – Present**
Research Assistant Providence, RI

- Analyzed eye-tracking data from learning experiments to investigate visual attention and cognitive processes
- Self-taught RStudio and Python-based statistical analysis, including heatmap visualization and correlation testing
- Independently validating the Universal Law of Generalization (ULG) using fMRI data from the THINGS dataset and comparing results with the lab's parallel studies on ULG in deep neural networks

Brown University Center of Computation and Visualization (CCV) **June – Aug 2024**
Data Science Intern Providence, RI

- Designed and trained a deep learning computer vision pipeline using Ultralytics YOLO to detect astrocytes in a 1,200-image microscopy dataset, achieving 79% accuracy, exceeding a published 2018 Nature baseline
- Built and deployed Dockerized TensorFlow workflows, fine-tuning models via Jupyter notebooks and scaling training on Brown's OSCAR high-performance computing cluster

COMMUNITY, LEADERSHIP, & EXTRACURRICULARS

Badminton **Sep 2023 – Present**

- Ranked Top 30 in the US; Spend 20 hours per week on training
- Captain of Brown Badminton Club: coached practices, organized recruitment, and provided transportation

Meiklejohn Peer Advisor **Aug 2025 – Present**

- Hosted monthly advising sessions for 6 advisees that involved major and course choices
- Organized advising group dinners to communicate about events, activities, and general campus life

SKILLS & INTERESTS

Languages: Python, Java, C/C++, C#, R, Dockerfile, LaTeX, MatLab
Platforms: Git, IntelliJ, VSCode, RStudio, Unity, Docker, Command-line Interface
Technical Skills: Software Development; Machine Learning; Data Analysis; Scientific Writing