SOPHIE SHAO

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EDUCATION

Brown University, *B.S. Applied Mathematics-Computer Science* — **Providence, RI**
- **GPA:** 3.85/4.0 — *Expected Graduation May 2027*
- **Relevant Coursework:** Data Structures and Algorithms, Computer Vision, Deep Learning, Applied Cryptography

PROJECTS

Depth-Based Portrait Filter (School) - *Python, CV2, Numpy, PyTorch* — *Dec 2024*
- Developed a deep learning pipeline to create depth maps and apply Gaussian Filter to images using stereo vision and CNNs
- Implemented Marigold for depth estimation to mask the background and foreground and YOLO for object detection
- Compared the two methods, resulting in CNNs having improved depth estimation accuracy by 90%

WORK EXPERIENCE

Brown Visual Computing — **Providence, RI**
Research Assistant — *Jan 2025 - Present*
- Developing a Python deep learning pipeline to convert textual input into SVG designs inspired by tangram art
- Researching text-to-visual generation models and optimizing algorithms for creative and efficient SVG output

Brown Office of University Communications — **Providence, RI**
Web & Digital Assistant — *Sept 2024 - Present*
- Collaborating on the creation of office and departmental websites using the content management system Drupal
- Owning content migration between web content management systems while ensuring a seamless user experience

DChained Capital — **Remote**
Research Intern — *June 2024 - Aug 2024*
- Developed Python scripts using Playwright and BeautifulSoup to collect investors with 10,000+ attributes
- Simplified outreach by creating an Excel database identifying 2,000+ leads in the Crypto and Blockchain space

Pittsburgh Chinese Cultural Center — **Pittsburgh, PA**
Webmaster — *June 2023 - Aug 2024*
- Maintained and updated the WordPress website, creating engaging blog posts and custom layouts

EXTRACURRICULAR ACTIVITIES

Brown University Women's Swimming and Diving — **Providence, RI**
NCAA Division I Student-Athlete — *Aug 2023 - Present*
- Balancing 20-hour training weeks, competitions, and travel while managing a full academic workload

Full Stack @ Brown — **Providence, RI**
Designer & Developer — *Jan 2025 - Present*
- Developing Web Applications for organizations at Brown University
- Implementing static and dynamic website features by React, HTML, CSS, and JavaScript

Brown Motion Pictures — **Providence, RI**
Tech Coordinator — *Aug 2024 - Present*
- Organizing the technological equipment and elements of the production cycle, including managing inventory
- Training crew members through hands-on workshops on using film equipment during shoots and post-production

Brown University Women in Computer Science — **Providence, RI**
Member — *Aug 2023 - Present*
- Facilitating and participating in panels, socials, and networking events focused on encouraging women into careers in tech

TECHNICAL SKILLS

- **Programming Languages:** Python, C/C++, Java, Javascript
- **Technologies:** React, Adobe Suite(Photoshop, Illustrator), Excel, Latex, Git, TensorFlow, Numpy, CV2