Brooke Wangenheim

Providence, RI | brooke_wangenheim@brown.edu | (415) 518-4147

Portfolio: brwangenheim.github.io/brooke-portfolio/

EDUCATION

Brown University: *Intended Sc.B. Computer Science,* 3.93/4.00 GPA **Expected Graduation May 2026**
- Relevant Courses: Software Engineering, Artificial Intelligence, Machine Learning, UI/UX, Data Science, Critical Data and ML Studies, Data Structures and Algorithms, Discrete Structures and Probability, Statistical Inference, Multivariable Calculus
- Awards: 2024 Data Science Fellowship, 2023 Undergraduate Teaching and Research Award

EXPERIENCE

The Carlyle Group, *AI Development and Integration Intern* Washington, DC | Jun 2025–Aug 2025
- Engineered and deployed a data extraction workflow to automate financial indicator retrieval from unstructured Excel statements, achieving 96% accuracy and an 80% reduction in analyst processing time.
- Integrated LLMs for information extraction with AWS (S3, EC2, DynamoDB) for scalable, production-grade deployment.
- Collaborated with business and data teams to design automation strategies for enterprise AI adoption..

Brown Data Science Institute, *Data Science Fellow* Providence, RI | Sep 2024–Dec 2024
- Built a full-stack map-based platform to enable crowdsourced plant taxonomy data collection for 100+ student contributions.
- Designed backend architecture using Node.js, Express, SQL, and REST APIs; implemented responsive frontend for real-time data visualization.
- Collaborated with faculty to integrate data tools into coursework on phylogenetic evolution.

Tripathi Biomedical Engineering Lab, *Research Assistant* Providence, RI | Jun 2024–Sept 2024
- Assisted in developing a Nvidia-based transformer model to predict modified nucleoside sequences, leveraging and transforming large-scale RNA and mass spectrometry datasets.
- Evaluated model performance using machine learning metrics such as accuracy, precision, and recall to optimize detection algorithms for biomedical applications.

College Hill Independent, *Web Board* Providence, RI | Jan 2024–May 2024
- Led a 5-member team in the redesign and optimization of the publication's website to improve appearance, performance and accessibility, improving performance scores by ~35% (Lighthouse audit).
- Streamlined content workflows, implemented CI/CD practices, and managed version control through Git and GitHub.

LEADERSHIP AND TEACHING

Brown CNTR, *AI Research and Development Team* Providence, RI | Aug 2025–Present
- Researched algorithmic fairness to inform socially responsible computing curricula adopted across Brown's CS department.
- Co-authored a curriculum handbook synthesizing interdisciplinary AI ethics research into accessible instructional material for usage across 75+ CS courses and 500+ students.

Brown Data Science Institute, *Head Teaching Assistant* Providence, RI | Dec 2024–Present
- Led instruction for courses in Python-based applied statistics and data science, mentoring 50+ students across 4 different courses.
- Created labs and teaching content on regression models, clustering, and data visualization using Pandas, Seaborn, and scikit-learn.
- Mentored students in project management, technical communication, and instruction across DS tools, methods, and applications.

SKILLS

Programming Languages: Python, SQL, Java, JavaScript, TypeScript, HTML, CSS
SWE: React, Node.js, Express, Bootstrap, REST APIs, BeautifulSoup
Data/ML: Scikit-learn, NumPy, Pandas, Matplotlib, Seaborn
Platforms: Github, AWS (Bedrock, DynamoDB, EC2, S3), Figma, Docker