

# Brooke Wangenheim

69 Brown St, Box 7241 | Providence, RI 02912 | Phone: (415) 518-4147 | Email: brooke\_wangenheim@brown.edu

## EDUCATION

### Brown University

Providence, RI | Expected Graduation May 2026

*Intended B.S. Computer Science, 3.90/4.00 GPA*

Relevant Courses: Data Science, User Interfaces and User Experience, Introduction to Software Engineering, Statistical Inference I, Introduction to Discrete Structures and Probability, Program Design with Data Structures and Algorithms

### The Branson School

Ross, CA | Class of 2022

*High School Diploma, 4.00/4.00 GPA*

US Presidential Scholar Nominee, 2022 | SAT: 1600, ACT: 36

## COMPUTER SCIENCE EXPERIENCE

### Meta Front-End Development Professional Certificate

Virtual | Completed September 2023

- Relevant Courses: HTML and CSS in depth, Principles of UX/UI Design, Programming with JavaScript, Advanced React, Version Control, Introduction to Front-End Development

### Relevant Academic Projects

Virtual | September 2022 – Present

- Primary Literature Metadata Extractor: Implemented full-stack development on a program that takes in papers, questions, & keywords to search for, and utilizes the ChatPDF API and a modified Levenshtein Algorithm to return organized tables containing the paper's metadata and reliability score.
- REPL: Implemented full-stack development on a program that allows users to load, view, search, and return census information for a given CSV or JSON file.
- Travel Planner: Used BFS and Dijkstra's algorithms to compute various routes for a given CSV file
- Decision Tree: Implemented a machine learning algorithm that predicts outcomes using training data
- Connect4: Designed a user interface that implements the Connect4 game, along with an AI player that uses the minimax algorithm and successfully beats various human players

### Lavner Education, Information Technology Intern

San Francisco, CA | July 2023 – August 2023

- Assisted with the setup and maintenance of on-site computer hardware, software, inventory management, and internet connectivity to ensure all programs and devices ran effectively.
- Provided ongoing troubleshooting, debugging, and technical support to staff and students.
- Delivered comprehensive instruction to students (ages 6-16) in various technical subjects, including introductory and advanced Python, Java, OOP, Scratch, HTML, and game development.

## RESEARCH EXPERIENCE

### Ibarra Lab, Undergraduate Research Assistant

Providence, RI | August 2023 – Present

- Conducted research on two closed-basin lake systems as climate proxies, exploring how topographic and climatic changes impact hydrologic systems.
- Conducted comprehensive timeseries analysis and hydrologic mass balance modeling of isotopic datasets using Python

## WEB DEVELOPMENT PORTFOLIO

### Critical Review, Web Team

Providence, RI | Sept 2023 – Present

- Implemented an updated website, including improved search functionality, browsing, and internal tooling for staff.
- Viewable at <https://thecriticalreview.org>

### Brown Political Review, Web Board

Providence, RI | Jan 2024 – Present

- Managed redesign and article display for the home page
- Work in progress, viewable at <https://brownpoliticalreview.org>

### Gymworld Marin, Web Developer

San Rafael, CA | June 2020 – Aug 2020

- Implemented an online registration system for classes and camps, alongside improving web design and navigation
- Viewable at [gymworldmarin.com](https://gymworldmarin.com) — Note: no role in the current photo and aesthetic choices of the site

## SKILLS & INTERESTS

**Programming Languages:** Proficient in Java, Python, SQL, JavaScript, HTML, CSS, ReasonML, DrRacket

**Advanced Mathematics:** Multivariable calculus, linear algebra, statistics & probability

**Technical Skills:** Proficient in Figma, Google Suite, Adobe Photoshop, Microsoft Office Excel