

# Jae-Hyun (Mason) Lee

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## EDUCATION

### Brown University

Expected June 2025

*Sc.B. in Computer Science-Applied Mathematics, GPA: 3.83*

*Providence, RI*

- **Relevant Coursework:** Data Structures & Algorithms, Computer Systems, Discrete Structures and Probability, Statistics, Linear Algebra, Operations Research, Partial Differential Equations

## EXPERIENCE

### Verizon

June 2023 – August 2023

*Finance Leadership Development Program Intern*

*Basking Ridge, NJ*

- Leveraged **Python** and **SQL** to extract, transform, and automate complex data processes across 4 diverse databases, enhancing data accuracy and operational efficiency
- Engineered intuitive and insightful reports using GUI tool **Qlik**, translating funding data from device manufacturers. Saved **600 hours** per year, contributing to more efficient resource allocation and strategic decision-making.

### Brown University

September 2022 – Present

*Teaching Assistant - Ordinary Differential Equations*

*Providence, RI*

- Led weekly recitation sessions and office hours **for 30+ students**, created solution guides for homework and graded for **250+** students weekly, hold review sessions for exams

### SmartCane Project

September 2022 – January 2023

*Software Developer, Project Manager*

*Providence, RI*

- Developed **Android** app with **Java**, **XML**, and **Android SDK** to design frontend and display data collected from a “smart cane” for use by patients, caregivers, and medical providers with team of 4
- Project Manager for Brown Design x Health, working to transition the project long-term

### Brown University Pre-College Programs

June 2022 – August 2022

*Resident Assistant*

*Providence, RI*

- Planned and facilitated weekly orientation sessions and mentor group meetings for new and continuing students, with an average group size of **45+** students

## PROJECTS

### SAT Solver – CDCL, DPLL, BCP

- **React** application to intuitively visualize and solve NP-complete Boolean satisfiability problems utilizing different algorithms including conflict driven clause learning, Boolean constraint propagation, and the David-Putnam-Logemann-Loveland algorithm

### Concurrent Store

- Developed and enhanced a high-performance concurrent key-value store in **C**, facilitating efficient operations on KV-pairs while dynamically managing load distribution
- Engineered backend architecture to support synchronized access, transforming it into a scalable **distributed system**

### Wiki Search Engine

- Developed custom search engine with **Python** to index and query XML wikis, and connected it to a user REPL
- Utilized TF/IDF term weighting and Google’s PageRank algorithm to return optimized results

## Leadership/Student Activities

Applied Math Dept. Undergraduate Group | *Website Manager*

January 2023 – Present

Meiklejohn Peer Advisor

August 2023 – Present

Brown Design x Health | *Project Manager*

September 2022 – January 2023

IM Soccer and Basketball

September 2021 – Present

## SKILLS

**Languages:** Python, JavaScript, Java, SQL, C/C++, HTML/CSS, MATLAB, XML

**Technologies:** React, Pandas, Node/Express, Qlik, Figma, Git, Android SDK, Excel