Jae-Hyun (Mason) Lee

(858) 306-4034 | jhmasonlee@gmail.com | masonlee.com

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, Statistics, Discrete Structures and Probability, Linear Algebra, Operations Research, Partial Differential Equations

EXPERIENCE

Verizon   June 2023 – August 2023
Finance Leadership Development Program Intern   *Basking Ridge, NJ*
- Applying **Python** and **SQL** for intricate data extraction, organization, and automation - ensuring efficiency and accuracy in handling complex datasets located across 4 different databases
- Utilizing GUI tools such as **Qlik** to visually represent data, creating intuitive and informative reporting on funding received from device manufactures saving **600 hours/year**

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 grade 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** and transforming it into a scalable **distributed system**

Book Review/Tracker
- **Full-stack** web application featuring a database created from scratch using **PostgreSQL**, while **utilizing Node.js/Express** for the backend and **React** for the frontend leveraging the OpenLibrary **API**

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
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, Node/Express, Pandas, Qlik, Figma, Git, Android SDK, Excel