Julian Dai

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Creative and passionate college student seeking challenging software engineering opportunities in a collaborative environment. Fast learner with solid foundation in computer science, real world experience, and strong analytical and leadership skills.

Education

Brown University   Providence, RI
Sc. B Mathematics - Computer Science (GPA 4.0)   *Sept. 2022 - Expected May 2026*

- Math Coursework: Linear Algebra with Theory, Multivariable Calculus with Theory, Statistical Inference, Abstract Algebra, Statistical Inferences, Differential Geometry
- CS Coursework: Advanced Introduction to Computer Science, Software Engineering, Deep Learning, Introduction to Systems, Design and Analysis of Algorithms

Experience and Technical Skills

Brown University, Research Assistant with Professor Vasilakis   June 2023 - Present

- Researched the security risks of the system call API in NodeJS applications. Worked in a team to develop a security system to perform language-level system call filtering in JavaScript.
- Conducted a large-scale study on NPM, curating statistics on all JavaScript packages in the registry to motivate the effectiveness of syscall filtering in JavaScript.
- Developed a methodology to accurately and compositionally generate a security score for third party packages in a domain-specific language.

Numedi Inc., Software Engineering Intern   May 2019 - Aug. 2022

- Designed and implemented a platform to display and visualize patient demographics and data in clinical trials with an interactive file display using React and Flask.
- Developed a backend python script used to compare raw database dumps of patient data.
- Implemented a python script to convert raw sas7bdat patient data into tabular PDF format.
- Created a GUI in PyQt5 for an RFID inventory management tool for the Swedish department store Manor.

Brown Space Engineering, Flight Software Team   Sept. 2022 - Present

- Collaborated with other students to develop embedded C programs to support the outreach and research missions of PVDX, BSE's next satellite.

Projects

Boston Crime Map | *Python, Javascript*   June 2019 - Aug. 2019

- Web app displaying the frequency and locations of Boston crime data in a heat map using Pandas and Google Maps API.

Activalytics | *Python, Javascript, HTML*   Aug. 2020

- Web app allowing activists to reach out to politicians and predict the response via machine learning algorithms.

Extinguish | *Python, Javascript, HTML*   Nov. 2020

- Web app predicting the location of wildfires in California by applying machine learning filters to prior data.

AtlasGPT | *NodeJS*   July. 2023

- Interactive discord bot, integrating ChatGPT, deployed in multiple servers to boost productivity

Skills and Interests

Languages: Fluent English, Proficient in Spanish and Chinese
Technical: Python, Java, Javascript, CSS
Tools: React, GitHub, Pandas, TensorFlow, Sci-kit, Node.js
Interests: Tennis, Hiking, Chess, Alto Saxophone