Jason Ho

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SUMMARY

Self-motivated computer engineering student with a background in backend software development in Java, Python, and C. Natural leader with experience spearheading software and engineering projects. Passionate about computer architecture, hardware security, machine vision, and software development.

EDUCATION

Brown University **Providence, RI**
Sc.B. Degree in Computer Engineering, GPA 3.90 *Expected May 2022*

- *Relevant Coursework*: Data Structures, Computer Systems, Differential Equations, Discrete Math, E & M
- *Clubs*: Brown Space Engineering, Engineering Student Ambassador

Seekonk High School **Seekonk, MA**
Valedictorian, GPA 4.0 *June 2018*

EXPERIENCE

Undergraduate Researcher **Providence , RI**
Secure Systems Laboratory *November 2019 - Current*

- Analyze memory vulnerabilities in low level coding languages and uses of new hardware features in embedded systems related to computer security.

Network Security Engineering Intern **Providence , RI**
Brown University CIS *April 2019 - September 2019*

- Rewrote copyright infringement script to run significantly faster using object oriented design with an emphasis on readability. Created a new API with DeskPro to manage infringement tickets while zgrepping through firewall logs. Able to search 2 times faster.
- Queried SQL databases to correlate Crowdstrike data with firewall permit-deny traffic in real-time dashboards to display the current state of malicious University traffic flow.
- Reduced Sumo Logic SIEMs parse times for firewall logs with reg-ex field extraction rules that were 20 times faster to allow for real-time updating of dashboards.

PROJECTS

Database Server *Dec 2019*

- Multi-threaded server written in C that used a binary search tree to store information with fine-grained locking. Tested against over 10,000 client threads.
- I am reading about SQLITE and its implementation to replace the binary search tree with more optimized methods in the second iteration of the project.

Web Browser *May 2019*

- Formulated design for backend of web browser written in Scala with JavaFX front end.
- Created server in Scala that hosts dynamic pages implementing a self-written search engine that uses PageRank and TFIDF score to adjust search results according to query of over 10,000 pages.

Reinforcement Learning on 2048 *January 2019*

- Developed 2048 game in Python during Hack @ Brown which implements simple rl infrastructure
- Trained model to perform exponentially better using q-learning against the random model.

SKILLS

- **Computer**: Python, Java, Scala, OCaml, C, MATLAB, Unix, SIEMs, x86 Assembly, Scheme, LaTex, GIT, Excel
- **Engineering**: Woodworking, 3D Printing, Laser Cutting, Soldering, Milling, Lathe, Solidworks