Calvin Li

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Education

Stony Brook University | Honors College   **Stony Brook, NY**
B.S. in Computer Science   *Aug 2015 – May 2019*
Relevant Coursework: Cloud Computing, Systems Fundamentals I - II, Game Programming, Analysis of Algorithms, Object Oriented Programming, Data Structures and Algorithms

Experience

Van Andel Research Institute   **Grand Rapids, MI**
Student Intern - High Performance Computing   *Summer 2017*
- Developed a storage/cost model using Google Charts API to assist researchers in data visualization.
- Coordinated needs assessments of data storage and performance for the Scientific Computing effort.
- Worked under IT/Administration department heads to develop an understanding of HPC research demands.

Stony Brook University   **Stony Brook, NY**
Teaching Assistant - Analysis of Algorithms   *Fall 2017*
- Held weekly review sessions on lecture content such as Big O Notation, sorting algorithms, and dynamic programming.
- Provided one on one assistance and conceptual instruction during office hours.
- Assisted in grading homeworks, reviewing and proctoring exams, and creating answer keys.

Stony Brook University   **Stony Brook, NY**
Research Intern   *Fall 2016*
- Developer in the Software Systems Division at the Center of Excellence in Wireless and Information Technology.
- Created dynamic functionality of NY Healthcare websites.
- Parsed web entries on New York's Clinic Directory into JSON format to facilitate data processing.

Projects

Shell
- Wrote a bash shell that supports scripting and operations such as builtin commands and executables.
- Implemented I/O redirection and piping on all commands.
- Managed signals for child process state changes, handling foreground processes and jobs.

Dynamic Memory Allocator
- Maintains a segregated free list to manage dynamic memory allocation.
- Implemented error-checking malloc, realloc, and free functions with backwards coalescing.
- Simulated real use cases with unit tests using the Criterion framework.

Regio Vinco Map Editor
- Developed a map editing application which tests players on geographical knowledge.
- Integrated file I/O using JSON, added sound and image editing capability.
- Incorporated an algorithm to interpret coordinate data and construct interactive polygons to represent countries.

Skills

Languages: Java, C, Javascript, HTML/CSS
Technologies: Node.js, Google Cloud Platform (GCP), Git, Nginx, Firebase, Bootstrap, Ansible, MongoDB