Vikram Singh

Buffalo, NY | **(###) ###-####** | **vikzilla18@gmail.com** | Linkedin.com/in/vikram-singh-ce/ | **https://airloaf.github.io**

SUMMARY

Senior at SUNY University at Buffalo majoring in Computer Engineering. I bring sound skills in both software and hardware. Proficient in programming languages such as C, C++, Java and Python. Profoundly interested in systems programming and embedded systems. I enjoy and excel when working in a collaborative environment. Passion for hacking, modifying and tinkering outside of work/school.

EDUCATION

SUNY University at Buffalo | Buffalo, NY   **Expected May '21**

Bachelor of Science, Computer Engineering   **GPA: 3.991/ 4.0**

College of Engineering and Applied Sciences | University Honors College | Association for Computing Machinery

PROFESSIONAL EXPERIENCE

Computer Engineering Intern | SRC, inc | Syracuse, NY   **May '20 – Aug '20**
- Explored and integrated software performance upgrades to boost throughput of radar systems written in C++
- Devised a mock client to benchmark performance of server operations

Software Engineering Intern | Calspan | Buffalo, NY   **May '19 - May '20**
- Structured a python API to record and organize experiment configurations and data within an SQL database
- Overhauled a front-end web application to tabulate and input experiment data using libraries such as React and Redux
- Established a GUI record keeping application to track of the status of tires being tested within the tire research facility

Software Engineering Intern | CytoCybernetics | Buffalo, NY   **Jan. '19 – May '19 | Aug. '19 - May '20**
- Remodeled a C++ GUI codebase to utilize the Model-View-Controller design pattern
- Refactored a C++ codebase to eliminate much of the repeated code

Teaching Assistant | University at Buffalo | Buffalo, NY   **Jan. '19 – May '19 | Aug. '19 - May '20**
- Instructed students on Systems Programming concepts through graded assessments and clarify questions in office hours

PROJECT EXPERIENCE

Pintos, Operating Systems Project   C
- Architected a POSIX system call handler with support for synchronization among concurrent processes
- Formulated a process scheduler to greatly improve CPU utilization

MOS 6502 CPU Emulator Library   C++
- Developed an instruction accurate MOS 6502 CPU emulator as a C++ library
- Heavily tested the library's API using the Boost C++ library

Chip8 Interpreter, A Video Game System Emulator   C++
- Developed a C++ library implementation of Chip8 with support of graphics and audio

Electronic Lock   VHDL
- Architected an electronic lock purely through a hardware description language

Bluetooth Controlled RC Car   C++, Java, Android
- Redesigned an RC Car to be operated by a smartphone via Bluetooth communication

Stock History Viewer   JavaScript
- Formalized a GUI application to view and analyze historical stock data utilizing APIs provided by Alpha Vantage

SKILLS

Programming Languages

Proficient: C, C++, Java, Python

Novice: Javascript, VHDL, MSSQL, MYSQL

Amateur: Verilog, Matlab, R, C#, Ocaml

Technologies

Windows, Linux, Raspberry Pi, Arduino, Android, ROS, Git, SVN, Agile, Scrum, TDD, Embedded Systems, Operating Systems Development, FPGAs, Microcontrollers, OpenMP, MPI, Docker.

CERTIFICATIONS & AWARDS

Secret Security Clearance	United States Government
Dean's List (All Semesters)	University at Buffalo
$5000 Provost Scholarship/year	University at Buffalo
$300 Grace W. Capen Academic Award	University at Buffalo
$750 NYSATE Merit Scholarship	NYSDOT
Gold Level Problem Solving	Hackerrank

RELEVANT COURSEWORK

Operating Systems, Systems Programming, Computer Organization, Computer Architecture, Algorithms, Data Structures, Parallel & Distributed Programming, Real-Time & Embedded Systems, Microprocessors, Robotics, Computer Security, Software Engineering