Aaron Bowen

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EDUCATION

Tufts University, Medford, MA
Bachelor of Science in Computer Science and Electrical Engineering, 2017
GPA: 3.52, Dean's List (all semesters)

RELEVANT COURSES

Algorithms, Programming Languages, Computer System Security, Machine Structure and Assembly Language, Data Structures (audited), Linear Systems, Microprocessor Architecture, Digital Electronics, General Electronics

PROJECTS

Image Compression: Pair-programmed software according to narrow specifications for compressing a PPM image by 75% and decompressing it back to its original format

Malvertisement Security Report: Composed a thorough analysis of the current state of malicious advertising as it affects internet users today (for report, see Github)

Binary Bomb: Derived expected input for a complicated program by reading its AMD64 assembly code – incorrect input would explode a theoretical "bomb"

Blood Pulse Oximeter: Designed and constructed an infrared pulse oximeter sensor and signal cleansing circuit

Shopify App: Rapidly learned Ruby and Ruby on Rails web framework to develop a secure, embedded Shopify App for shop owner usage

ACTIVITIES

Tufts PolyHack 2015: Built a snakes-and-ladders game that used web sockets to concurrently handle input from multiple users – achieved finalists status in overall hackathon judging

JumboCode: Lead development on student team to build a web app pro-bono for a non-profit

SKILLS

Languages: C#, C, SQL, JavaScript, CSS, HTML, Java, Python, Ruby, Perl, C++, AMD64 Assembly
Software: Git, PowerShell, SPICE, MATLAB, LabVIEW, Microsoft SQL Server, Vim, SolidWorks
Frameworks and Technologies: Ruby on Rails, AngularJS, NodeJS, ExpressJS, Heroku
Hardware: Breadboard wiring, soldering
Foreign Languages: Spanish (intermediate), German (intermediate)

EXPERIENCE

Valetude, LLC. Healthcare Software and Services Wakefield, MA
Software Development Intern *Summer of 2015*

- Led several projects to create secure, data-driven internal web tools (C#, JS, SQL, Git)
- Completed a self-directed data warehousing project using the Extract-Transform-Load methodology (Powershell, C#, Python, SQL, Git)

Olin College of Engineering REU Needham, MA
Undergraduate Engineering Education Researcher *Summer of 2014*

- Researched engineering education by collaborating with professionals in the field and compiling literature reviews
- Analyzed data for human research with a small team of students and mentors
- Implemented qualitative and quantitative statistical analysis with R and Excel

Superior Diesel Inc. Rhinelander, WI
Summer Intern *Summer of 2013*

- Modeled engine housing components with SolidWorks and participated in assembly and testing of final product
- Created Visual Basic macros in Excel for the automation of data formatting in several departments and company-wide inventory organization