**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