**Aaron Bowen**

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**EDUCATION Tufts University,** Medford, MA

Bachelor of Science in Computer Science and Electrical Engineering, 2017

GPA: 3.57, 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, Microelectronics, Probabilistic System Analysis

**PROJECTS** **Swarm Bot – in progress:** Design an autonomous swarm bot in a small team using the engineering method of concept planning, analysis, design, and testing

* Apply circuit theory and signal processing theory to digital and analog electronics in the context of engineering design
* Provide project schedules, schematics and specifications, build prototypes and present a working system

**Shopify App:** Rapidly learned both Ruby and Ruby on Rails to develop a secure, embedded Shopify app for merchant use

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

**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

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

**SKILLS Languages:** C, C++, C#, Java, SQL, JavaScript, Python, Ruby, Perl, CSS, HTML, AMD64 Assembly

**Software:** Git, Microsoft SQL Server, Vim, PowerShell, SPICE, MATLAB, LabVIEW

**Frameworks:** .Net Framework, AngularJS, NodeJS, ExpressJS, Ruby on Rails

**Platforms:** Windows, Linux, OS X, 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