

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 <ul style="list-style-type: none">- 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 <i>Software Development Intern</i> Summer of 2015 <ul style="list-style-type: none">• 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 <i>Undergraduate Engineering Education Researcher</i> Summer of 2014 <ul style="list-style-type: none">• 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