Joseph Breda

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Education

University of Massachusetts Amherst (Commonwealth Honors College)   September 2015 - May 2019

Bachelors of Science in Computer Systems Engineering

GPA: 3.88/4.00

Relevant Coursework: Software Intensive Engineering, Signals & Systems, Hardware Organization & Design, Data Structures (Java), Circuits, Digital Logic, Multivariable Calculus, Differential Equations

Research

Solar-Weather Metrics Database REU   May 2017 – August 2017
- Developed program in Python to data mine and construct a large database used for modeling and predicting solar panel output using weather forecast data
- Data mined weather and solar metrics using Beautiful Soup web scraping and XML data querying and constructed a database using Pandas
- Quickly determined libraries and techniques to use and learned syntax in a timely manner
- Described data schema in co-authored research paper

Biodegradable Plastic REU   May 2015 – June 2015
- Worked with graduate student at Boston College converting cellulose fibers to organized polymers with plastic like qualities as a potential plastic alternative
- Gained experience using lab equipment and a familiarity in a lab environment

Projects

Function Generator   January 2017 - May 2017
- Constructed function generator from cascaded integrator, low-pass filter, and stereo-amplifier
- Gained experience with soldering iron, multimeter, and oscilloscope tools
- Implemented MATLAB, Excel and Pspice to simulate and predict circuit performance

Dictionary tool Program   September 2016 – January 2017
- Developed a Java program that takes in a dictionary text and performs multiple functions, including searching, sorting, scrabble helper, spell check, and anagram generator
- Gain experience with data structures in Java such as trees, heaps, hash tables, and linked lists
- Tested and debugged code and created an organized driver class

Music Production Engineering   May 2016 - Present
- Composed and produced original music using industry standard Ableton Live 9
- Self-taught proficiency in mixing, mastering and sound design with both hardware and software
- Developed creative and artistic sense as well as ability to self teach and self critique

Skills

Software: Java, C, Python, JavaScript, HTML, CSS, Bash, Latex, Git, MATLAB, Pspice, Verilog, Adobe, Ableton, Microsoft Office
Technical: Soldering, Oscilloscope, Function generator, Piano, Guitar
Characteristics: Entrepreneurship, Compartmentalization, Self Teaching, Creativity, Organization, Minimalistic