Charles DiGiovanna

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Education:

Binghamton University, State University of New York
Bachelor of Science in Computer Science, Expected May 2017
Bachelor of Arts in Mathematical Sciences, Expected May 2017
GPA: 3.71; Dean's List Fall 2013, Spring 2014

Skills:

Programming Languages: Python, C, Java, HTML, CSS, JavaScript, PHP, MATLAB
Programs: Git, MATLAB, Mathematica, Microsoft Excel, Minitab, Solid Edge, Xilinx ISE

Projects:

Independent Projects *See the code at:* ***www.github.com/cd17822***

NeighborhoodFor.me – November 2014
- Worked with 3 team members to design a service for citizens to become more involved in the community
- Text messages could be sent from organizations so that those without internet access could stay connected
- Set up communication between the site and a Mongo database via JavaScript and organized the database

Palindromica – November 2014
- Developed an original game where a user clicks to expose palindromes from a moving string of digits
- Digits or spaces can be clicked in order to expose an odd/even palindrome with auto-detected length
- Includes an elegant, simplistic user interface with a detailed instruction screen

Bonkers – July 2014
- Built an original game where a user creates barriers to deflect a ball away from black holes and into a goal
- Added a level-creator mode where I designed multiple levels by moving objects and saving their positions
- Level-saving and high score-saving were made possible by using File I/O methods

2048 Design and AI – May 2014
- Designed a fully functional replica of the popular game, "2048," that can be played using the arrow keys
- Includes a heuristic artificial intelligence with the ability to solve the board any time the user tells it to
- Devised a segment of code able to run multiple simulations of the AI to gather statistics on success rates

Binghamton University

Wearable Power – April 2014
- Designed a hypothetical wearable power source that would generate electricity from ambient energy
- Utilized Solid Edge to create a CAD model of our device with intricate detail and precise measurements
- Compiled a 50+ page engineering report with 7 teammates to sell our idea while honing collaboration skills

Arduino Speedometer – October 2013
- Applied my knowledge of circuitry to create and improve upon an Arduino-based speedometer design
- Utilized the Arduino IDE to code the intended processes and upload the design onto an Arduino logic board
- Presented the team's fully-functional final project at a university-wide engineering exposition

Experience:

Computer Architecture Research Lab, Research Assistant – September 2014-Present
- Imported and experimented with the gem5 simulator system on my machine
- Gathered simulations of the ALPHA, ARM, and x86 architectures to run benchmarks and simulation scripts
- Created scripts and binaries to test on the ALPHA and ARM architectures to begin developing a benchmark

Community Involvement:

BU Pipe Dream, *Web Developer* *December 2014-Present*
HackBU, *Active Member* *October 2014-Present*
Computer Architecture Research Lab, *Research Assistant* *September 2014-Present*
Dickinson Residential Community, *Student Mentor* *August 2014-Present*
Good Samaritan Hospital, West Islip NY, *Junior Volunteer* *February 2009- January 2013*