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: 3.63/4.00; Dean's List Fall 2013, Spring 2014

Skills

Programming Languages: CoffeeScript, JavaScript. Python, Java, C, C++, HTML, CSS, Jade, MATLAB
Programs: Git, Node.js, MongoDB, Bootstrap, LaTeX, MATLAB, Microsoft Office, Minitab, Vim, Xilinx ISE

Projects

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

Cutoff-catcher *September 2015*
- Developed a search algorithm utilizing specified step iterations followed by a recursive binary search
- Optimized algorithm performance by testing techniques like rounded division, recursion, and adjusted iteration
- Published the package as a node module to npm for public use and open-source feedback

Bet Log *April 2015*
- Created an online betting hub for groups using Node.js, CoffeeScript, Express, MongoDB, Jade, CSS, and Bootstrap
- Integrated the SendGrid API to send text messages when bets are matched or events are completed
- Organized an instruction page and a clean, user-friendly interface that is compatible with mobile devices

NeighborhoodFor.me *November 2014*
- Collaborated with 3 team members to design a service for citizens to become more involved in the community
- Incorporated the SendGrid API to send messages from organizations to those without Internet access
- Established and organized a Mongo database using Node.js, Express and Mongoose to connect with the site

Bonkers *July 2014*
- Built an original game in Python where a user creates barriers to deflect a ball away from black holes into a goal
- Implemented a level-creator mode where levels are designed 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" in Python which is played using the arrow keys
- Included 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

Papilio One Stopwatch & Timer *December 2014*
- Applied my knowledge of digital logic to design a stopwatch and timer with the Xilinx ISE Project Navigator
- Created a complete schematic with multiple original components to satisfy the project objective
- Successfully programmed a Papilio board where a user can switch between timer and stopwatch mode with ease

Experience

Zipdrug, Software Development Intern *June 2015-August 2015*
- Created a dashboard utilizing both front-end and back-end development skills for the company to manage orders
- Developed server-side logic for Zipdrug's API, including adding endpoints, and updating models
- Integrated various external services to help create a more seamless ordering process

Community Involvement

HackBU, *Active Member* *September 2014-Present*
Computer Architecture Research Lab, *Research Assistant* *June 2014-June 2015*
Dickinson Residential Community, *Student Mentor* *August 2014-August 2015*
Good Samaritan Hospital, West Islip NY, *Junior Volunteer* *February 2009-January 2013*