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: 3.64/4.00; Dean's List Fall 2013, Spring 2014, Fall 2015

Skills

Programming Languages: Swift, JavaScript, Python, Java, C, C++, CoffeeScript, HTML, CSS, Jade, Matlab
Programs: Git, XCode, iOS, Node.js, MongoDB, Bootstrap, LaTeX, Microsoft Office, Realm, Vim, JFLAP, Xilinx ISE

Projects

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

Independent Projects

Imbored. *December 2015*
- Developed an iOS app to occupy people who are bored using XCode, Swift, Realm, and iAd
- Created database models for activities and categories so that users can enter data tailored to their interests
- Received approval from the App Store to publish the app and was able to collect revenue from advertisements

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 to npm for public use and open-source feedback and received over 500 downloads

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

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

Radio App Simulator *December 2015*
- Applied my knowledge of C++ to design and implement a simulation of an online radio app
- Allowed for user input of new songs, likes and dislikes, number of songs, start times, and rests to elapse time
- Implemented a hybrid of a hash table and heap to ensure efficient lookup times for the functions listed

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
- Automated various internal services to help create a more seamless ordering process

Extra-Curricular

Microsoft Coding Competition, *First Place* *September 2015*
Coding For A Cause Hackathon, *Second Place* *November 2014*
HackBU, *Active Member* *September 2014-Present*
Computer Architecture Research Lab, *Research Assistant* *June 2014-May 2015*
Dickinson Residential Community, *Student Mentor* *August 2014-August 2015*