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: 3.62/4.00; CS: 3.82/4.00

Skills

Programming Languages: Swift, Python, Java, C++, C, JavaScript, CoffeeScript, HTML, CSS, Pug (Jade)
Programs: Git, XCode, iOS, Node.js, MongoDB, Solr, SQL, Realm, Bootstrap, LaTeX, Vim, Microsoft Office

Experience

Bloomberg, Software Engineering Intern   *May 2016 – August 2016*
• Improved upon financial applications by making enhancements to UI and corresponding back-end services
• Researched and developed scripts so applications could better gather and parse data from a Solr search engine
Codecademy, Pro Advisor   *February 2016 – May 2016*
• Guided newcomers through the steps needed to reach their goals, and reasoned through code in their exercises
• Utilized and enhanced professional communication skills by advising users in various programming languages
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
• Improved upon Zipdrug's API, and automated internal services to create a more seamless ordering process

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

Independent Projects

Hit the Weekly   *October 2016*
• Developed and published an iOS app to help runners adhere to a weekly regimen and track their mileage
• Integrated Apple's HealthKit API for simplistic workout synchronization across third-party applications
• Utilized Core Data to save users' plans and preferences, and Core Graphics to draw and animate mileage charts
Cutoff-catcher   *September 2015*
• Developed a search algorithm utilizing user-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 accumulated over 500 downloads
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
• Created a script to run multiple simulations of the AI and gather statistics on success rates

Binghamton University

Log-Structured File System Simulator   *May 2016*
• Studied the intricacies of a log-structured file system and designed a simulator in C++
• Supported replications of various Unix commands for users to read and write files to the virtual system
• Created custom commands to help the team test and debug the system as collaboration was ongoing
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

Extra-Curricular

Hack AE, *Best Media Hack*   *November 2016*
Microsoft Coding Competition, *First Place*   *September 2015*
Coding For A Cause Hackathon, *Second Place*   *November 2014*
Computer Architecture Research Lab, *Research Assistant*   *June 2014 – May 2015*
Dickinson Residential Community, *Student Mentor*   *August 2014 – August 2015*