

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; Dean's List Fall 2013, Spring 2014, Fall 2015, Spring 2016

Skills

Programming Languages: Swift, Python, Java, C++, C, JavaScript, CoffeeScript, HTML, CSS, Pug

Programs: Git, XCode, iOS, Node.js, MongoDB, Solr, SQL, Bootstrap, LaTeX, Microsoft Office, Realm, Vim, JFLAP

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 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
- Devised a segment of code able 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

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 for applications to 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

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