Charles DiGiovanna

469 French Ave. North Babylon, NY 11703 • (631) 901-6772 • cdigiov1@binghamton.edu • www.charlied.me

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
Major GPA: 4.00/4.00; Cumulative GPA: 3.73/4.00; Dean's List Fall 2013, Spring 2014

Skills

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

Projects

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

Bet Log (www.betlog.co) *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

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 to hundreds of viewers at a university-wide exposition

Experience

Computer Architecture Research Lab, Research Assistant *September 2014-Present*
- Researched under a professional advisor experimenting with the gem5 simulator system on a community server
- 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

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