Daniel P Burke

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EDUCATION

University of Michigan Ann Arbor, MI
Computer Science Bachelors of Science in Engineering, International Engineering Minor April 2018
GPA: 3.67/4.00

- Awards: Dean's List, University Honors

Relevant Coursework: Data Structures and Algorithms, Foundations of Computer Science, Machine Learning, Computer Security, Operating Systems, Autonomous Robotics, Web Systems, Databases

Universidad de Navarra: Tecnun San Sebastián, Spain
Study Abroad May 2016 – June 2016

- Maintained travel blog sponsored and published by the International Programs in Engineering Department

WORK EXPERIENCE

The MathWorks, Inc. Natick, MA
Computer Science Development Group Intern May 2017 – August 2017

- Worked with Embedded Coder Quality Engineering team on implementing new testing tools that explore Simulink model characteristics using MATLAB
- Involved in the design process and worked with the mentor to evaluate alternative designs
- Prototyped a Simulink model searching tool from the ground up, and created regression tests for the tool
- Documented the implementation process and commented the source code for the tool for knowledge transfer
- Learned uses of OOP, testing, and database technologies (MySQL, Neo4j, etc.)

University of Michigan Digital Media Commons Ann Arbor, MI
Design Lab Intern September 2016 – Present

University of Michigan Department of Mechanical Engineering Ann Arbor, MI
Computer Consultant October 2015 – April 2016

RESEARCH EXPERIENCE

University of Michigan Department of Electrical Engineering and Computer Science Ann Arbor, MI
Research Intern May 2016 – August 2016

- Updated and modified existing MATLAB code base and documentation
- Programmed new movement algorithms for robots cutting 5-35% off total run times for simulations
- Built and logged various scenarios comparing performance in abstracted vs. non-abstracted scenarios
- Coded controller to simulate parallel composition with the ability to construct a finite-state machine from various smaller finite-state machines and run Dijkstra's algorithm on the resulting graph

PROJECTS

Microrobotics – Universidad de Navarra: Tecnun in San Sebastián, Spain May 2016

- Collaborated with two other University of Michigan students and a TecNun student to create a robot consisting of Legos, a sensor board, and Arduino – in competition with other teams to win trials.
- Designed algorithms with teammate and programmed Arduino code in C allowing the robot to change its functionality/program upon pressing a button, allowing it to perform various mechanical tasks.

Gaming for the Greater Good January – April 2015

- Designed and created a game developed in Python using Eclipse to assist children diagnosed with Autism Spectrum Disorder on a team of 3 other students.
- Coded a core game play module for the game involving the player avoiding obstacles, including aspects of score tracking and user feedback and ensuring functionality alone or with other 2 modules
- Bug tested games from other groups in class and responded to bug tests for own game

LEADERSHIP EXPERIENCE

Animation Club - Officer September 2016 – April 2017

- Organized meetings and assisted in running workshops and other club-related events

SKILLS

Technical Languages: C++, Python, MATLAB, C, SQL, html, Javascript, Java
Software: Sublime, Eclipse, Visual Studio, Unity, Unreal Engine, Neo4j, Git
Environments: Windows, Linux
Languages: Spanish