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: 3.63/4.00
Relevant Coursework: Data Structures and Algorithms, Foundations of Computer Science, Machine Learning, Computer Security, Operating Systems, Autonomous Robotics, Web Systems, Databases, Accessible Software

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

SKILLS

Programming Languages: C++, Python, Javascript, SQL, HTML, CSS, MATLAB, Java, Neo4j, C
Frameworks and tools: Git, Flask, React, Hadoop, Anaconda
Environments: Windows, Linux

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 Studio Intern September 2016 – Present
- Assist classes and individuals in the Design Studio and serve as an approachable resource and guide
- Established organization structure for workflow and communication using Trello and Slack
- Designed template for projector, and coded a Python script to fetch the interns on shift from Google Calendar
- Founded and run an interest group for machine learning and music using Tensorflow: Magenta

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

BatChords January 2018 – April 2018
- Design and develop an accessible music score editing program tailored for our client
- Code a web application using HTML, CSS, Javascript, Ajax, React, Python and the Flask framework
- Utilized existing Flat.io API, communicated with the Flat developers for feedback on the API and support

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.

LEADERSHIP EXPERIENCE

Animation Club - Officer September 2016 – April 2017
- Organized meetings and assisted in running workshops and other club-related events