Daniel P Burke

616-238-1043 | burkdan.github.io | burkdan@umich.edu

EDUCATION

University of Michigan Ann Arbor, MI
Computer Science Bachelors of Science in Engineering, International Engineering Minor April 2018
GPA: 3.66/4.00
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, Unreal Engine 4, Hadoop, Anaconda
Environments: Windows, Linux

WORK EXPERIENCE

Mediascape Berkley, MI
Software Engineer August 2018 - Current
- Quickly learn new technologies to design, animate, and program a wide variety of multimedia applications

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 using MATLAB that explore Simulink model characteristics over large model sets featuring thousands of data points.
- 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 – April 2018
- Assisted classes and individuals in the Design Studio and served 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 ran 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
- Programmed new movement algorithms for robots cutting 5-35% off total run times for simulations.
- 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
- Communicated closely with client to create an accessibility web application for music score notation that confined desired functionality to a AKAI MIDI keyboard to improve composition workflow with only one hand.
- Coded a web application using HTML, CSS, Javascript, Ajax, React, Python and the Flask framework.
- Personally programmed the main React interface for pads, re-mapped button and knob functionality on AKAI keyboard, tested and coded interactions with Flat.io embedded API, and designed and coded front end.

OBS Google Calendar Events Script March 2018 - April 2018
- Published script on OBS forum with ~120 downloads per month that triggers streaming/recording, updates text sources and loads images based on Calendar events using the Google Calendar and OBS Python APIs.

Microrobotics – Universidad de Navarra: Tecnun in San Sebastián, Spain May 2016
- Team trial competition to design and create a robot consisting of Legos, a sensor board, and Arduino.
- Coded algorithms in C allowing the robot to perform various mechanical tasks for different trials.