

Daniel P Burke

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WORK EXPERIENCE

Array of Engineers

Grand Rapids, MI

July 2020 - Present

Software Engineer

- Lead development of Python package to interface with custom AoE hardware device and provide tools for creating automated tests for client hardware devices with aim to replace old lengthy manual test procedures.
- Scaled development effort from prototype to 7 developer team and the foundation of multiple customer projects comprising over a quarter of company yearly revenue.
- Lead development of front-end Angular application incorporating Google Blockly to make automated test development accessible through block programming and ease-of-testing features like Jenkins integration.
- Work with customers to determine project specific testing needs and develop custom harnesses, utilizing Python libraries such as Pyautogui, OpenCV, Numpy, Pandas and Tesseract.

Mediascape

Berkley, MI

August 2018 - July 2020

Software Engineer

- Balanced and maintained multiple solo and small team multimedia projects ranging from 360 videos to AutoShow installations for contracted customers such as Volkswagen, Ford, AAA and Berkshire Hathaway.
- Developed applications using HTML, CSS, Javascript, Electron, Python and Unreal Engine 4.

The MathWorks, Inc.

Natick, MA

May 2017 – August 2017

Computer Science Development Group Intern

- Worked with Embedded Coder Quality Engineering team on implementing new testing tools using MATLAB that explored 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 knowledge transfer.
- Learned uses of OOP, testing, and database technologies (MySQL, Neo4j, etc.).

University of Michigan Digital Media Commons

Ann Arbor, MI

September 2016 – April 2018

Design Studio Consultant

- Assisted classes and individuals in the Design Studio and served as an approachable resource and guide.
- Founded and ran an interest group for machine learning and music using Tensorflow: Magenta.

University of Michigan Department of Electrical Engineering and Computer Science

Ann Arbor, MI

May 2016 – August 2016

Research Intern

- Programmed controller to simulate parallel composition with the ability to construct a finite-state machine.
- Implemented new movement algorithms for robots cutting 5-35% off total run times for simulations.

PROJECTS

BatChords

January 2018 – April 2018

- Communicated closely with the client to create an accessible web application for music score notation that confined desired functionality to an AKAI MIDI keyboard to improve one-handed composition workflow.
- Coded a web application using React and Flask web stack and interfaced with Flat.io embedded API.

OBS Google Calendar Events Script

March 2018 - April 2018

- Published script on OBS forum with ~120 downloads per month that can trigger streaming/recording, update text sources and load images based on Calendar events using the Google Calendar and OBS Python APIs.

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: Python, Javascript, HTML, CSS, SQL, C++, MATLAB, Java, Neo4j, C

Frameworks and Tools: Git, Angular, Flask, React, Unreal Engine 4 & 5, Electron, Anaconda

Environments: Windows, Linux