

BRYNN DAVIS

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SUMMARY

- 3 years of experience in **C++**, **C**, and **JavaScript**, with a specialty in **distributed systems**
- Extensive web platform development experience in **NodeJS** and **Go Lang**
- Significant skills in debugging using **GDB** and sufficient understanding of **GCC**

EXPERIENCE

Tesla, Software Engineer

Apr. - Aug. 2019

- Designed an over-the-air update system for **IoT** devices using **MbedOS** on ARM Cortex devices that allowed for an entire fleet to be updated asynchronously all while requiring less than 2 minutes of down time
- Developed scaling infrastructure for providing firmware binaries and manifests to IoT devices, including security over **TLS** and **encryption**

Tesla, Automation Engineer

Sep. - Dec. 2018

- Constructed a unit testing framework in Structured Text for TwinCAT3 and an accompanying testing suite in .NET that can be used by individuals or as an automated Jenkins build tool
- Worked within a special projects team to design a high-tech conveyance system capable of asynchronous pallet transfers with "just in time" dynamic modular servo synchronisation

Curtiss-Wright Defence Solutions, Software Engineer

Jan. - Apr. 2018

- Implemented a producer-consumer **multithreading** structure to solve a synchronisation problem between diagnostic outputs of multiple Intel processors with **C++**
- Optimised an Intel Processor throttling test in **C++** by using numeric methods to recognise stable die temperature and reduced run time by ~20%

PROJECTS

Handwritten Digit Classifying Neural Network

Feb. 2018

- Obtained 93.14% accuracy on the MNIST dataset through backpropagation by **gradient descent** and reduced overfitting through implementing **L2-regularisation** and a **cross-entropy** cost function in **Python**

Allergen-free Recipe Web App

Aug. 2017

- Built with **NodeJS** to provide a simple means for anaphylactic people to find safe and fun recipes
- Used **IIFE** structured **JS** to retrieve recipes from an **AJAX** call to an API and handled the response with various **GUI** updates using primarily **JQuery** for **DOM** manipulation

EDUCATION

University of Waterloo, ON

Expected Apr. 2020

- 4th year Bachelor of Applied Sciences in Honours Co-op Mechatronics Engineering