Daniel J Barton

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Objective

Striving to automate and streamline inter-system tasks perceived be isolated and independent. Connecting what was once thought to be separate.

Experience

Reliability Engineer May 2022 — Current

Bestbuy *Richfield, Minnesota*

- Maintained and enhanced observability tooling: Splunk, Elastic, Grafana, Graphite
- Frequently worked with Terraform, Chef, and Ansible to provision and configure AWS infrastructure
- Automated snapshot cleanup for Grafana, alongside building an improved restoration mechanism for dashboards
- Lead the migration task for authentication from crowd over to AD through SAML for Splunk
- Implemented automation for "index" creation. This enabled app teams to not be reliant on the regular 2 week deployment cycle where they would need to create a ticket to be added to the queue of new indexes
- Rearchitected log backup mechanism(for resiliency) for tens of thousands of dollars in yearly cost savings

Quality Intern at Boston Scientific June 2021 — September 2021

Boston Scientific *Arden Hills, Minnesota*

- Self-led the design and implementation to streamline diagnostics of Latitude Communicators. Circa 80% of communicators returned were able to be automatically diagnosed through this new implementation. Estimated time saved from technicians of 20%, or roughly 8 hours per week. Time saved enabled technicians to apply more time to more critical products like pulse generators
- Utilized Tera-Term macro programming language to directly interact with Latitude Communicator micro-processors for streamlining diagnostics
- Finished development a month ahead of schedule, spending the remaining time to manually validate and create thorough documentation regarding the new testing product
- Communicated with lead engineers on ensuring depth of testing and test run time to assemble an advantageous testing tool. Interacted directly with technicians to ascertain desired testing

Education

University of Minnesota Minneapolis, Minnesota

Bachelor of Computer Science *May 2022*

- GPA: 3.38

Projects

[**Python**] **Optical Digit Classifier Neural Network** | *Numpy* November 2021

- Built a multi layer perceptron to recognize pre-processed images of handwritten numbers. Determined ideal number of hidden units within the hidden layer for optimal recognition accuracy and run-time. Test accuracy was 93%. 2D and 3D visualization using the hidden units with the largest variance to show the distribution of classifications.

[**C**] **Basic Chatroom** | *Pthread* April 2021

- Local server-client relationship from scratch allowing for chatting utilizing FIFO's. Extendable to sockets and over-the-network chatting. Utilized elementary multi-threading, and taught elementary concepts of networking.

[**C++**] **Voting System Simluation** | *doxygen* April 2022

- School team project that acted as a demonstration of waterfall and agile scrum work methodologies
- Created central waterfall documents, SRS and SDD
- Simulated user stories with arbitrary feature requests to be implemented within 72 hours on an existing codebase
- Leveraged several OOP patterns(e.g. builder, observer) to follow SOLID principles, and enable adaptability/modularity

Technical Skills

Languages: Python, C, C++, Rust, MySQL, Node.js, JavaScript, HTML, CSS
Technologies: AWS, Openshift, Terraform, Chef, Ansible
Certifications: Backend Development and API – FreeCodeCamp
Developer Tools: Git, Ansible