Benjamin Austin

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Education

BSEng, Software Engineering at the University of Victoria ***2017 - Present***

- Expecting graduation: August 2022.

Technical Competencies

- **Languages:** C, C++, Python, Go, JavaScript, CSS, HTML, Assembly, LaTeX.
- **Tools:** AWS, Git, Docker, gRPC, jQuery, Wireshark.
- **Databases:** PostgreSQL, etcd.

Work Experience

Junior DevOps Engineer Co-op at MarineLabs ***Sept 2021 - Present***

Software Developer Co-op at National Research Council Canada ***Jan - Apr 2021***

- Researched and prototyped a collection of software systems in C++ to schedule, execute, and store the data of solar observations for the ongoing ARTTA-4 project at the Dominion Radio Astrophysical Observatory (DRAO).
- Utilised a key/value database and its features to dynamically monitor a subset of observation requests, reducing database traffic while simultaneously allowing for real-time observation schedule updates.
- Consolidated communications between unique types of endpoint devices by implementing JSON over HTTP communication with RESTful API's, allowing the executor to communicate with multiple types of devices via a single protocol.

Quality Assurance Analyst Co-op at ACD Systems ***Jan - Aug 2019***

- Performed a variety of quality assurance testing on a wide range of web services throughout their development lifecycle, providing confidence in product releases, updates, and maintenance.
- Tested functionality, ergonomics, and quality of components during a sitewide redesign to increase maintainability and improve consistency across locales.
- Bridged communication between marketing and development teams to improve efficiency and maintain awareness of project progress and needs.

Technical Projects

128-Bit RSA Cryptography Implementation ***2021***

- Researched, implemented, and optimized a 128-bit implementation of the RSA cryptography algorithm on a 32-bit ARM processor using a variety of optimization techniques and a proposed hardware assist.

Distributed Systems and Data Privacy ***2021***

- Contributed prototype implementations and research to propose innovative solutions using distributed systems while simultaneously aiming to preserve the privacy of sensitive generational knowledge.

Brain Tumour Detection with Machine Learning ***2021***

- Helped design, train, and optimize a simple machine learning model to recognize brain tumours in MRI brain scans.