Eric Mikulin

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Software Developer

- Experienced embedded Linux and full-stack cloud Software Developer looking for internship or co-op opportunities.
- Experienced in Agile scrum development.
- Excellent teamwork and communication skills.

Programming Skills

- **Languages :**
  - **Fluent**: C/C++, Java, Python, Javascript, Bash
  - **Proficient**: Ruby/Rails, Assembly, Verilog, Wiring, Rust
  - **Familiar**: iOS (Swift), Android (Java)
- **Technologies :**
  - **Operating Systems**: Linux, OSX, Windows, iOS, Android
  - **Frameworks & Libraries**: Django, Rails (Ruby), React, Python Fabric
  - **Tools**: Yocto, Jenkins, Terraform
  - **Database**: MySQl, MongoDB, Redis
  - **Cloud**: AWS, Docker, Google Cloud Vision API, Azure Cognitive Systems

Experience

- **D-Wave Systems Inc.** Burnaby, BC
  Systems Software Co-op *May 2018 – Present*
  - Wrote API endpoints for D-Wave's Leap cloud service back-end to enable critical front-end user interface functionality such as maintenance notifications and solver access.
  - Created a large number of relevant Django unit tests alongside the API endpoints to increase test coverage and reduce the number of regression bugs encountered.
  - Created front-end views for maintenance notifications, QPU solver availability and user profiles using the React JS framework.
  - Wrote and maintained back-end integration between the Leap web application and the Business team's Zendesk and Salesforce systems so that the Business team could access new leads and generate important reports.
  - Created an automated docs website publishing pipeline using Terraform and Jenkins that enabled the technical writers to publish docs without involving developers. This saved both developer and writer time by completely automating what was a long manual build process.
- **Novax Industries** Delta, BC
  Software Programmer (Contractor) *October 2017 – March 2018*
  - Wrote C userspace Linux drivers for an ARM based custom embedded system to enable use of the i2c gpio and sd card reader devices.
  - Wrote Python and Bash scripts for managing logs on the system.
  - Updated the XML configuration library to speed up and make the configuration system more robust, as well as align with additional new specs.
  - Created Yocto recipes and layers for the embedded device, shortening the time to deploy a custom Linux distribution to the embedded device, saving developer time during development and testing.
- **Minesense Technologies Ltd.** Vancouver, BC
  Software Intern *May 2017 – August 2017*
  - General C/C++ application development and maintenance for multiple x86 based Linux embedded PCs.
  - Rewrote existing C++ code for transferring large amounts of spectrum data between embedded PCs into object oriented C++ classes. The new classes improved system performance and reduced the time to integrate new features.

- Wrote a kernel module to expose embedded application settings in the Linux /proc filesystem, reducing embedded system configuration time and complexity and therefore speeding up application development and testing as well as allowing run-time configuration changes to facilitate testing on a read-only disk.
- Wrote an automated update utility that allowed for automated updates across multiple write-protected disk partitions which reduced the update time from 20+ minutes to a few minutes and eliminated human error.
- Created over 10 new Yocto recipes and modified several existing recipes to integrate the code into a new automated build system, improving the time to configure builds by reducing it into a single configuration line.
- Created a web-based remote testing and install application, turning a 30+ minute error-prone manual install and configuration processes into simple automated task that could install the software in less that 5 minutes. The application could also automatically test the system configuration, making the developer time to test the device negligible.

- **Minesense Technologies Ltd.** Vancouver, BC
  Software Intern *June 2016 – August 2016*
  - Created several Unix shell and Python scripts for use in an x86 based embedded Linux system.
  - Manually patched and compiled the Linux kernel with real-time and other custom patches in order to improve the I/O throughput of the system, allowing it to achieve critical system performance requirements.
  - Modified the Linux kernel init script and initramfs to boot with overlayfs (Union filesystem) to make the system read-only from disk. This improved the embedded PC robustness and reliability during frequent but unexpected power cuts.

- **Minesense Technologies Ltd.** Vancouver, BC
  Software Intern *June 2015 – August 2015*
  - Created an automated unit testing framework using Python unittest and Fabric that allowed developers to test remote embedded Linux systems from their local machines.
  - Setup and integrated unittest framework into Jenkins for continuous integration, improving testing coverage by automating tedious manual testing tasks.
  - Wrote over 100 Python unittests that provided critical test coverage where there was none previously, significantly reducing the number of bugs that re-appeared in system testing.

Education

- **University of British Columbia** Vancouver, BC
  Bachelors of Applied Science in Computer Engineering *Sept. 2016 – Expected May 2021*

- **Sir Winston Churchill HS** Calgary, AB
  International Baccalaureate Curriculum *Sept. 2013 – July 2016*

Qualifications

- **Canadian Amateur Radio License**: Basic w/ Honors; Achieved 2017

Awards

- **Best use of AWS, et al.**: NW Hacks 2018, University of British Columbia; Achieved 2018
- **Best Domain**: NW Hacks 2017, University of British Columbia; Achieved 2017
- **2nd place**: Calgary Collegiate Coding Competition, University of Calgary; Achieved 2016

Clubs & Design Teams

- **UBC Unmanned Aircraft Team**: Software developer for Ground Control Systems; 2018
- **UBC Code the Change**: Full-Stack Developer on Chingari project; 2017 – 2018
- **UBC Baja Team**: Suspension Sub-team, microcontroller sensor project; 2016 – 2017
- **FRC Team 4719 - Technetronic Bulldogs**: Mechanical and Software Teams; 2013 – 2016

Hobbies

- **Outdoor Activities**: Hiking and camping; Mountain and road biking; Longboarding and Skateboarding
- **3D Printing**: Design and 3D print objects
- **Film Enthusiast**: Enjoy watching classic movies; Enrolled in Film Studies classes