Natalie Smith | Engineer

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Professional Profile

- Skilled software developer.
- Angular 2 expert.
- Full-stack development using ruby on rails.
- A focus on powerful yet intuitive user interface design.
- Experienced with both unit and integration tests.
- Ability to work effectively within a team setting while also being a motivated, proactive and self-starting independent worker.
- Possess willingness and work ethic to learn new technologies and skills
- Extensive experience with customer service and practical problem-solving as well as exceptional written and verbal communication skills

Technical Skills

- HTML5/CSS3
- Angular 2
- Ruby on Rails
- C/C++
- C#/.NET
- Microcontrollers
- Javascript/jQuery
- Unit Testing
- JSON/XML
- Image Processing
- Sensor Integration
- Control Systems

Education

University of Victoria **Victoria BC**
B.Eng, Biomedical Engineering *2011–2016*
Specialization in Mechatronics

Experience

QuikStor Security & Software **Van Nuys CA**
Software Engineer *May 2017–Present*
Responsible for front-end development of large-scale cloud web application. Designed, developed and implemented page components using .

- Responsible for front-end development of a large-scale cloud web application.
- Designed, developed and implemented user-interface components using Angular 2.
- Created intuitve yet powerful designs using HTML, CSS3 and Typescript.
- Designed efficient and reliable HTTP network communication.
- Collaborated in a team environment.

University of Victoria **Victoria BC**
Undergraduate Researcher *May–Aug 2015*
Worked in the Crystal Growth Laboratory designing a new control system for a 30 zone crystal growth furnace.
- Ran experiments on the crystal growth furnace including material preparation, furnace loading, and sample testing using a Scanning Electron Microscope
- Designed an implemented a fuzzy PID control system in LabView with adaptive control for the crystal growth furnace

University of Victoria **Victoria BC**
Undergraduate Researcher *Sept–Dec 2013*
Worked in the Biomedical Design and Systems Laboratory developing a medical phantom for use in testing and calibrating an ultrasound-controlled hand prosthesis.
- Designed and developed a medical phantom representing the ultrasonic properties of the tendon-hand system
- Tested prototypes and determined ultrasonic properties of materials
- Used an Ultrasonix ultrasound machine and MatLab to capture video and images of phantom prototypes

Island Health **Victoria BC**
Clinical Engineering Co-op *Jan–Apr 2013*
Worked in the Biomedical Engineering department of Island Health to assist in tasks such as device procurement and installation, cost analysis, preventative maintenance, and consulting with medical professionals.
- Assisted in medical device procurement and installation in hospital settings
- Performed cost analysis for major contract renewals
- Performed preventative maintenance on medical devices such as infusion pumps, defibrillators, and AEDs
- Consulted with medical professionals within multiple health networks across Canada in preparation for a networked fetal monitoring system

Saanich Commonwealth Place **Victoria BC**
Team Leader, Facility Attendant *2011–Present*
Work in supervisory roles as a Team Leader and Facility Attendant to oversee multiple staff and ensure that programs are running safely and effectively.
- Team Leader: Directly supervise a team of lifeguards to ensure safe pool coverage, oversee first aid situations, mediate public relations situations and provide excellent internal and external customer service
- Facility Attendant: Responsible for overseeing all facility programs, coordinating and providing back-up for all staff and conducting emergency procedures in case of emergencies

Technical Projects

Web Development: Developed multiple full stack web applications in both Ruby on Rails and Angular2. Portfolio available upon request.

Mechatronics: Designed the firmware to accomplish a conveyor belt sorting task

- Integrated multiple sensors, actuators and motors with a microcontroller programmed in C

Engineering Design: In a team of students, designed and developed a device to mimic the breathing action of human lungs

- Integrated multiple sensors and a linear actuator using a microcontroller to produce the mechanical breathing action of the device and to monitor several environmental conditions of the device such as humidity, C02 content, and temperature

Neural Networks: Designed a neural network to classify data instances in an online breast cancer database as malignant or benign

- Used MatLab to implement a three-layer feedforward neural network to automatically classify instances of breast cancer malignancy

Biomedical Image Processing: Solved task of retinal vessel segmentation in retinal images by

using MatLab to implement adaptive local thresholding by multithreshold probing

References

Dr. Nikolai Dechev	Dr. Kelly Stegman-Brooks	Michael Sheehan
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