

BRENDAN HOLMES

☎ 647-331-9473
✉ beholmes@uwaterloo.ca
🏠 beholmes.com
🐙 github.com/brendanholmes

SKILLS

Embedded computer systems:

- Proficient in C/C++, VHDL
- Familiar with Java, C#, JavaScript, System C, Verilog, MIPS and ARM assembly
- Windows, Linux, Android, real-time custom operating systems
- Eclipse, Altera Quartus, ModelSim, Microsoft Visual Studio

Image processing:

- Proficient in MATLAB programming
- Knowledge of image enhancement using filters
- Edge detection and image segmentation

Digital hardware design:

- FPGA design using VHDL and Verilog
- Performance and area optimisation, Data flow diagram design and pipelining, State machine design and optimisation, Using Altera Quartus, ModelSim and Precision RTL

Web development:

- Familiar with HTML5, CSS3, JavaScript, JQuery
- Embedded software, Mobile web applications, Object-oriented programming, Storyboarding and requirements analysis

Electronics:

- Op-amp and transistor circuits, Second-order RLC circuits, Oscilloscopes, Electromagnetism and radio-frequencies, Materials science and design
- Circuit modelling and analysis with LTSPice

Project management:

- Version control, Reports and documentation, Flow charts, Verification and validation
- Task management and team communication

EDUCATION

University of Waterloo, Waterloo ON, Canada

Jan 2017 – Apr 2017

- Exchange program for electrical and computer systems

Monash University, Melbourne VIC, Australia

Mar 2015 – Nov 2018

- Candidate for Bachelor of Engineering (Electrical and Computer Systems), Honours

University of Melbourne, Waterloo ON

Mar 2010 – Nov 2013

- Bachelor of Arts (Media and Communications)

PROJECTS

Multicore compression-decoder embedded system (2017) [🔗 beholmes.com/#projects/](https://beholmes.com/#projects/)

Superpixel algorithm based on k-means clustering implementation (2017) [🔗 beholmes.com/superpixel/main.html](https://beholmes.com/superpixel/main.html)

Performance and area optimized Kirsch edge detector in hardware (2017) [🔗 beholmes.com/#projects](https://beholmes.com/#projects)

Run tracker mobile web application for Android (2015) [🔗 beholmes.com/projects/run-tracker/index.html](https://beholmes.com/projects/run-tracker/index.html)

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WORK EXPERIENCE

Student welfare officer - Monash Student Association, Melbourne VIC, Australia *Dec 2015 – Dec 2016*

- Managed a portfolio of student services and advocacy campaigns
- Worked with Monash University administration to deliver lighting installation for student safety
- Worked with volunteers and suppliers to deliver over 5,000 main meals at a unit price of under a dollar
- Reported to and voted at Monash Student Council meetings to decide on direction of the organization

Flow monitoring technician - American Digital Systems, Melbourne VIC, Australia *Aug 2014 - Mar 2016*

- Installed and tested sensors for underground water system flow monitoring
- Disassembled hardware and tested batteries
- Managed the warehouse and ordered stock
- Working within Occupational Health and Safety regulations

Journalist assistant - Channel Nine News, Melbourne VIC, Australia *Aug 2013 - Sep 2013*

- Assistant to the state political reporter
- Researched stories, drafted content
- Conducted vox-pop interviews
- Attended press conferences and expert interviews

Producer and reporter - SYN Radio, Melbourne VIC, Australia *May 2013 - July 2013*

- Reported for current affairs program, *Panorama*
- Pitched story ideas, produced packages, presented on air
- Audio editing using Adobe Audition and Audacity