BRENDAN HOLMES

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⦿ github.com/brendanholmes

SKILLS

Embedded systems:
- Proficient in C/C++, VHDL
- Familiar with Java, C#, System C, Verilog
- 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

Software development:
- Proficient in C/C++, Java, C#, familiar with JavaScript, MIPS
- Embedded software, Mobile web applications, Object-oriented programming, Storyboarding and requirements analysis, Programming in C/C++, Java, C#, JavaScript, MIPS assembly [not yet]

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

Embedded multicore MPEG image decoder   beholmes.com/projects/decoder
- [placeholder]

Effective superpixel algorithm based on k-means clustering (2017)   beholmes.com/projects/superpixel
- Implemented a state-of-the-art superpixel algorithm from research paper in MATLAB

Small and fast Kirsch edge detector in hardware using FPGA (2017)   beholmes.com/projects/edge-detector
- [placeholder]

Run tracker for Android (2015)   beholmes.com/projects/run-tracker
- [placeholder]

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WORK EXPERIENCE

Student welfare officer - Monash Student Association, Melbourne VIC, Australia   Dec *2015 – Dec 2016*
- Managed the services for students that impacted their general wellbeing on campus
- Worked with the university administration on project to install more lighting in key areas
- Worked with volunteers and suppliers to deliver approximately 5,000 free, healthy meals to students 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 water system flow monitoring
- Managing the warehouse and ordering new stock as required
- Working within Occupational Health and Safety regulations