

JAMIE A. MACDONALD

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Objective

I am looking for **fast-paced** fulltime employment in the field of **Software Development**. I have a strong **math and programming background** from my studies and hobbies, and I am excited by **elegant, innovative** solutions to **real** human problems.

Education

2010–2014 | **BSc Mathematics & Engineering, Computing and Communication**
Queen's University, Kingston Ontario

Programming

Git; **Python**: web dev in Django, Flask; OOP; scripting; Abstract Syntax Tree parsing; Decorators; list comprehensions; Matplotlib, Scipy, Numpy; Sphinx; **Linux**: **bash**, **fish** scripting; **C**: Makefiles, compiler flags, memory management; **Java**; **Javascript**: Coffeescript; Nodejs, Express, mongodb, D3, jQuery; **HTML**: Liquid, Jinja, Jade templates; **CSS**: SCSS, Stylus; Box model; **Octave**, **Matlab**; **LaTeX**;

Mathematics

Probability: Stochastic processes; **Information Theory**: Data Compression, **Communication Theory**; **Coding Theory**: Algebraic Structures; **Control Theory**: Differential equations, Linear time-varying systems; **Signals**, **Linear Systems**: Transform Theory, Sampling, Linear Algebra

Projects

2013–2014 | **Channel-Optimized Vector Quantization of Correlated Images for Transmission over a Wireless Channel (Fourth Year Project/Thesis)**
Design & implement a Lossy Joint Source-Channel Code which exploits the Correlation in two random sources (images)
(Information Theory, Discrete Cosine Transform, C programming, Python matplotlib, LaTeX writeup)

2010 | **Child Soldier Cycle (Activism)**
Biked 3000km from Ottawa to Newfoundland running an awareness campaign for child soldiering – collected over 1500 red handprints as a petition to the media to provide better coverage of global Child Soldiering issues
Leadership, outreach, perseverance, organization

Work Experience

Summer 2014 | **Software Programmer – IBM Watson Visualization Engine**
Maintain charting/vis engine (Java); frontend JS demo app, evaluate API; D3js, jQuery; agile development; Java AWT, canvas; GeoJSON
Collaborate with an international team; build strong communication skills

Activities

Clubs: Queen's Hack Nights

Recreation: Yoga, Rockclimbing, Biking, Longboarding

Music: Keys, Trumpet, Voice