Thomas Alexander

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Personal Statement

As a graduate student I am an extremely dedicated worker and thrive in dynamic experiences. I am a very quick learner and pick up new tasks extremely fast. As a university athlete I am also very capable of hard physical work. I am very good at customer facing jobs and making sure that every party involved in a job is satisfied. I am looking for work over the summer prior to heading back to school.

Education

Undergraduate School on Experimental Quantum Information Processing *May 2013 - June 2013*
Institute for Quantum Computing, Waterloo, ON

Bachelor of Science, First Class Honours with distinction: Physics, double minor: Computer Science and Mathematics GPA 3.7 *September 2010 - May 2014*
Mount Allison University, Sackville, NB

Career History

Undergraduate Research, *Institute For Quantum Computing* *Summer 2013*
- Working with researchers to design an experiment to improve the contrast of neutron interferometry phase measurements, using Bayesian MCMC methods.
- Designed and developed a neutron interferometry control system to be installed at National Institute for Standards and Technology in Gaithersburg, MD.
- Implementation of likelihood functions on GPGPUs.

Software Development Intern, *G2 Research* *Summer 2012*
- Development of cellular tracking and analysis software.
- Setup OpenStreetMaps rendering server.
- Product and software research.

IT Manager, *The Argosy Newspaper* *2011-2012*
- Setup and maintenance of Drupal news site.
- Cloud server setup on NGINX/PHP-FPM stack.
- Serviced companies equipment and network.

MSDS Database Creation, *Maritime Beauty* *Summer 2011*
- Setup a Material Safety Data Sheet database for Maritime Beauty on proprietary software.
- Networked with outside companies to develop relationships and acquire information.

Plastic Recycler, *Whitestar Plastics* *Summer 2010*
- Baling of recycled plastic.
- Plastic Sorting.
- Collection of plastics.

Production Manager, *Skratch That* *2009-2010*
- Production manager of an entrepreneurial startup that was part of the Junior Achievement program. Responsible for production of the companys product and production implementation. Skratch That won Company of the Year in all of Atlantic Canada for 2010.

Produce Clerk, *Pete's Frootique* *Summer 2009*
- Stocking of produce displays.
- Cycling of displays.
- Aiding customers.

Returns Sorter, *ASCO Warehouse* *Summer 2008*
- Sorting of returns.
- Mailing of phonebooks.

Hockey Referee, *Bedford Minor Hockey* *2006-2010*
- Officiate hockey games.

- Timekeep hockey games.

SKILLS

Physics: Neutron Interferometry, Quantum Mechanics, Quantum Computing, Electrodynamics, Optics, Solid State Physics, Classical Mechanics, Analog Electronics, Digital Electronics

Hardware: Arduino, GPGPU programming, Cloud computing, Analog Electronics

Programming: Java, Scala/Akka, HTML5/CSS, JavaScript/Node.js, Mathematica, LaTeX, Python/scipy, SQL, C, Cuda C, OpenCl, git, svn, MongoDB

Programming Concepts: Algorithms Analysis, Object Orientated Programming , Unit Testing, Quantum Computing, Computer Architecture, Functional Programming, Data Structures, Databases, Networking, Neural Networking, Basic AI

Operating Systems: Linux, Windows, Mac OSX

LEADERSHIP ACTIVITIES

Tutor, Physics and Computer Science   *2010 - Current*

AWARDS AND HONORS

4'th Place, The 2012 Northeast North America Regional ACM Contest Preliminary   *2012*

3'rd Place, Robot's East Atlantic Championships   *2010*

1'st Place, Robot's East Atlantic Championships   *2009*

1'st Place, Robot's East Atlantic Championships   *2008*