Vincent Russo

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Experience

- **Graduate Researcher – University of Waterloo**, Waterloo, ON — Sep 2012 – Dec 2016 (anticipated)

  – Contributor to *QETLAB*; a software package used to study theoretical aspects of quantum computing. Software has been cited in numerous scientific publications.

  – Published 10 papers in peer reviewed journals and open-sourced all software used in these papers.

- **Software Engineer, Intern – Raytheon BBN Technologies**, Cambridge, MA — May 2012 – Sep 2012

  – Contributed to the development of *QuaFL*; a statically typed domain specific language to study quantum computing using Python.

  – Coordinated management of software projects between three teams in different countries.

- **Research Assistant – Wayne State University**, Detroit, MI — Nov 2010 – Jan 2012

  – Contributed to development of *GOMC*; a GPU-driven open-source Monte Carlo simulation engine written in C++ that uses the CUDA library. Our software yields a 29 times faster implementation than an optimized serial CPU-driven code.

- **Software Engineer – Wayne State University**, Detroit, MI — Nov 2010 – Nov 2011

  – Developed a web client in PHP and Python to interface with mobile devices that tracked and stored data from several hundred patients in a MySQL database. Software has been cited in peer-reviewed work.

- **Software Engineer, Intern – University of Michigan**, Ann Arbor, MI — May 2010 – Sep 2010

  – Processed several hundred gigabytes of data sent back from spacecraft. Used IDL, C++, and Python to perform analysis and data visualization for internal reports.

  – Solved an issue unresolved by NASA engineers by analyzing anomalous data sent back from spacecraft. Presented an oral and written report of work to department.

Education

- **University of Waterloo** — Sep 2012 – Dec 2016 (anticipated)

  PhD, Computer Science

- **Wayne State University** — Sep 2010 – Aug 2011

  MSc, Computer Science

- **Wayne State University** — Sep 2007 – Aug 2010

  BSc, Computer Science

Awards

- Recipient of David R. Cheriton Graduate Scholarship in computer science (Award amount: $10,000).
- Recipient of the National Science Foundation's IT Communities of Practice Award in computer science.

Independent Projects

- Developed Android applications in Java totalling over 1,500 downloads from the Google Playstore.
- Contributed code for symbolic manipulation of quantum mechanical operators to SymPy.
- Built an Android application for a NASA sponsored event that uses machine learning and visual recognition tools to study climate change.
- Host and write my own blog using Jekyll. Posts on programming and machine learning.
- Developed various software projects as a freelance developer.

Additional Experience

- Machine Learning Foundations – certificate earned - (Coursera E-learning).
- Stanford: Statistical Learning – with distinction - (Stanford Online).
- Intro to Machine Learning and Intro to Data Science – audit - (Udacity E-learning).
- Served as teaching assistant for courses based on Algorithms and Data Structures, Discrete Mathematics and Python Programming.

Technical Skills

- **Languages:** Python, C/C++, Matlab, Java, MySQL, PHP, R, JavaScript*, Haskell* (*some experience)
- **Tools:** NumPy, SciPy, Scikit-Learn, Pandas, Matplotlib, Regex, LaTeX, Django, bash, git