

 4144 Powderhorn Crescent, Mississauga ON, Canada  416-219-1317  ryan.marchildon@utoronto.ca

SUMMARY

I am a highly-driven engineer, physicist, and entrepreneur with a deep analytical background and a passion for pushing the boundaries on how we can harness technology to enrich our lives. Having worked as both a deep-science researcher and a hardware company founder on big problems in medicine and computing, I am now refocusing on Artificial Intelligence, and am looking to join an energetic, visionary team that is using AI to build a better future. I am quick to learn, agile, versatile, and thrive on challenges.

SKILL HIGHLIGHTS

- **Data Science and Machine Learning:** experience programming neural networks in TensorFlow and Keras; experience with Python libraries for data cleaning, analysis, and classification; understanding of algorithms, pipelines, and best-practices; projects include image classification (Wide ResNets) and customer review analysis (aspect-entity extraction with RNNs)
- **Applied Mathematics and Physics:** scientific computing and simulation; statistics, linear algebra, signal processing, differential equations; medical imaging, semiconductor technologies, quantum computing, optics and photonics
- **Experience Launching a Startup:** company founding, design thinking, validated learning, crafting pitch decks, holding investor meetings, filing IP, financial forecasting, market research, customer development, grant filing (@ QuWare Inc.)
- **Leadership:** vision creation, team building/hiring, mentorship, and project management in a variety of roles (see portfolio)
- **Research and Prototyping,** including experimental design, testing, fabrication, and hardware/software troubleshooting
- **Excellent Oral and Written Communication:** public speaking at research conferences, published authorship in peer-reviewed journals, investor presentations, elevator pitches, experience conveying technical insights to non-technical audiences

PROGRAMMING & SOFTWARE SKILLS

- Python (advanced, including SciPy, Pandas, scikit-learn, and seaborn libraries)
- Deep Learning APIs (TensorFlow, Keras)
- Servers and Databasing (JavaScript, Node.js, MySQL)
- Source control (Git)
- MATLAB (advanced)
- C (advanced)
- IPython notebooks; Jupyter
- LaTeX
- Simulation (ANSYS, COMSOL, PSPICE, Lumerical)
- Mathematica (advanced)

RECENT WORK EXPERIENCES

Co-Founder and CTO, QuWare Inc. Oct. 2016 – present	Founded a medical imaging hardware startup and successfully led it through Toronto's Creative Destruction Lab accelerator (2016-2017 graduating class).
Research Associate, University of Toronto Dec. 2016 – May 2018	Defined and managed research projects for emerging optical technologies; led experiments, provided training, coordinated team; secured research funding.
Junior Electrical EIT, Condoplex Inc. Mar. 2016 – Sept. 2016 (part-time contract)	Interfaced and tested a prototype echo-cancellation unit with the company's voice-over-IP intercom systems and audio processing hardware.
Research Assistant, University of Toronto Mar. 2016 – Dec. 2016 Sept. 2012 – Mar. 2015	Designed and manufactured chip-based medical biosensors in a cleanroom environment. Designed, simulated, and tested integrated optical circuits for advanced sensing and information-processing applications.
Intern, Institute for Quantum Computing May 2012 – August 2012	Programmed control software and algorithms for prototype quantum computers; assembled signalling hardware; ran and analyzed tests.
Technical Director, Queen's University Fuel Cell Team Apr. 2011 – May 2012	Led over 40 undergraduate students in the design of the world's first hydrogen-powered snowmobile for the SEA Clean Snowmobile Challenge. Snowmobile won 3rd place in its debut competition.

EDUCATION

2015	Master of Applied Science, Electrical and Computer Engineering University of Toronto, Toronto, Canada	<u>Cumulative GPA: 4.0/4.0</u>
2012	Bachelor of Applied Science, Engineering Physics Queen's University, Kingston, Ontario, Canada	<u>Cumulative GPA: 3.97/4.0</u>

>> Visit www.rpmarchildon.com to see my portfolio, achievements, and full work history. <<