

ANDREW ANDRADE

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mrandrade.com

EDUCATION

University of Waterloo

Expected Apr. 2016

Candidate for Bachelor of Applied Science

Mechatronics Engineering

Port Credit Secondary School

Sep. 2007 - Jun. 2011

Regional Science and Technology Program

Specialist High Skills Major in Manufacturing

INDUSTRY EXPERIENCE

PetroPredict, Inc

Sep. 2013 - Present

Technical Co-founder and Lead Researcher

Kitchener, ON

- Leading the research and development for the next generation of intelligent tools for the oil and gas industry
- Tasks range from scientific computing and data analysis, to infrastructure setup, to technical recruitment

MrAndrewAndrade

Sep. 2013 - Present

Lead Consultant

Waterloo, ON

- Lead the mechanical, industrial, product and manufacturing design for a wireless backhaul antenna waveguide using the 60 GHz 802.11 AD specifications
- Work lead to first product in the market and was a major contributing factor to company raising \$8MM
- Consulting included mechanical design, CAD modeling, customer specification drawings, supplier relations, outsourcing manufacturing, quality testing and validation and developing marketing material

Facebook

Jan. 2014 - Apr. 2014

Manufacturing Engineering Intern

California, Oregon and China

- Co-invented, prototyped, tested, manufactured and deployed a custom designed PCBa RAID card test fixture in factories in China.
- Further refined the test fixture reducing size by 8x after deploying in factories
- Project lead to a \$1.4 MM hardware cost savings and additional savings in reduced energy consumption, decreased testing time and decreased worker handling
- Designed and deployed hardware test fixtures in factories related to a top secret project for internet.org
- Prepared customer requirement documents and conducted first assembly inspections and audits at vendors, integrators and manufacturers in China, Europe and America
- Drove quality issues and vendor management at Facebook's data centers, firefighting quality issues and vendor rework collaborating with American, European and Chinese manufacturing and assembly data center equipment (racks, server motherboards, network switches, storage solutions etc.) vendors
- Lead quality and manufacturing of a new server product line completing bill of material revisions, engineering change notices, manufacturing change orders
- Conducted transportation testing including test monitoring, shake and vibration tests

Peraso Technologies*Embedded Software Engineering Intern*

May 2013 - Aug. 2013

Toronto, ON

- Conducted firmware and embedded development for a baseband RF Wifi Chip (MAC and PHY layer).
- Wrote developer debug GUI and firmware features using CLI over UART, SPI and USB interfaces.
- Participated in board bring up and debugging using data acquisition and lab test equipment (multimeters, oscilloscopes, power supplies)

Waterloo Institute for Sustainable Energy*Undergraduate Research Assistant*

Jan. 2013 - Apr. 2013

Waterloo, ON

- Completed data analysis of energy consumption and environmental indicators
- Conducted energy policy research in context of environmental sustainability
- Identified trends in energy consumption and environmental indicators on the global scale
- Dependency tested the correlation between economic motivations and energy product internationally
- Presented results in visually compelling forms for presentations and compendium literature

TopHat*Campus Ambassador*

Feb. 2013 - Mar. 2013

Waterloo, ON

- Spearheaded adoption on campus of classroom response system with guidance from Sales and Marketing
- Developed product awareness after establishing target audiences and business model
- In first month closed the most demo's and received monthly award for best sales rep.

Suncor Energy*Reservoir Engineering Intern*

Sep. 2012 - Dec. 2012

Calgary, AB

- Conducted a complete oil field segment analysis for redevelopment on Libyan assets using PVT, material balance, reserves estimation, and water influx calculations based on well test and production data
- Applied decline curve analysis and field optimization forecasting to propose redevelopment which would yield a 33% increase in sustainable oil production using water flood and EOR techniques

Imtex Membranes*Mechanical Engineering Intern*

Jan. 2012 - Apr. 2012

Mississauga, ON

- Integrated 6 σ and lean methodologies (DMAIC and DFSS) for analytical engineering design and project feasibility.
- Designed and constructed bench scale apparatus and experiment setups in a petrochemical R&D environment
- Developed Excel spreadsheets and other MS Office documents using macros and forms to assist researchers input data resulting in a decrease of the opportunity for data input error
- Collected, documented and translated trend data into improved build standards and standard operating procedure guidelines.

Chrysler*Summer Student*

Jun. 2011 - Aug. 2011

Brampton, ON

- Applied World Class Manufacturing continuous improvement ideals in the automotive manufacturing industry in daily part assembly and part manufacturing routines
- Diagnosed cost of poor quality issues removing hidden factories, inherent waste and non-value added tasks by documenting Quick Kaizens and participation in time studies
- Improved time management skills, multitasking and job optimization in daily routines operating glass sealing and air conditioning vacuum robots

Cantech Tool and Machine Co
Student Machinist and CNC Operator

Sep. 2009 - May 2011
Mississauga, ON

- Operating manual and CNC milling machines, lathes and surface grinders
- Maintained a high quality of work when machining parts with very high tolerances ($\pm 0.002''$)

City of Mississauga
Deck Supervisor, Lifeguard, Swimming Instructor and Camp Councillor

Aug. 2009 - May 2011
Mississauga, ON

- Instructed leadership techniques to students in performing lifesaving methods and swimming as a First Aid and Lifesaving Instructor
- Strengthened team building and team management resulting in no incidents or injuries while supervising
- Demonstrated by example strong communication skills and decision making during emergency situations

Institute for Quantum Computing
Summer Research Student

Jul. 2010 - Aug 2010
Mississauga, ON

- Participated in the Quantum Cryptography School for Young Students (QCSYS) program.
- Conducted hands-on experiments with lasers and group work focused on quantum cryptography.

Royal Canadian Army Cadets
Master Corporal

Sep. 2008 - June 2010
Mississauga, ON

- Completed Army Cadet Leadership and Cadet Leadership Instructor training
- Organized, lead and trained teams of junior cadets in basic training for outdoor skills, drill, marksmanship, music and leadership

PATENTS AND PUBLICATIONS

Andrade, A. Multifaceted approach to oil field segment analysis using artificial intelligence, Society of Petroleum Canadian Regional Paper Contest, August 2014

Andrade, A. Growing and scaling high performance teams, Conrad Business, Entrepreneurship and Technology Leadership Blog, August 2014

Fakharzadeh, M., Andrade, A., Jafarlou, S., Lynch, B., Tazlauanu, M., Waveguide adapter plate to facilitate accurate alignment of sectioned waveguide channel in microwave antenna assembly. U.S. Patent Application 14217683, filed March 2014. Patent Pending

Andrade, A. Winning a Facebook Hackathon Without a Single Line of Code, Open Compute Foundation Technical Blog, March 2014

PROFESSIONAL ORGANIZATION LEADERSHIP

Society of Petroleum Engineer's Student Chapter, Member, May 2013 - Present.

Ontario Society of Professional Engineers, Student Member, Sept 2011 - Present

University of Waterloo Petroleum Energy Association, Advisor, October 2013 - Present

University of Waterloo Petroleum Energy Association, VP Marketing, May 2013 - September 2013

University of Waterloo Nanorobotics Group, Macrofabrication Lead, September 2012 - September 2013

University of Waterloo Nanorobotics Group, Team Member, September 2011 - September 2012

University of Waterloo Entrepreneurship Society (UWES), Advisor. May 2013 - September 2013

AWARDS AND RECOGNITIONS

Third best overall masters' research paper, SPE Canadian Regional Paper contest. August 2014
Pan IIT Global Entrepreneurship Competition Award, India Institutes of Technology. June 2014
David McFadden Energy Entrepreneur Challenge, Ontario Center of Excellence. May 2014
Elevator Pitch Competition Award, Ontario Center of Excellence. May 2014
Velocity 25k Fund, University of Waterloo. April 2014
Best Use of Arduino, BeMyApp Factory Hackathon. March 2014
International Hackathon Winner, OpenCompute Foundation. January 2014
Best use of MongoDB, LAHacks. January 2014
Velocity 1k Fund, University of Waterloo. December 2013
Velocity People's Choice Award, University of Waterloo. December 2013
Co-op Student of the Year Honorable Mention, University of Waterloo December 2013
Nicol Entrepreneurial Award, University of Waterloo. November 2013
Developer Movement Yellowbelt, Microsoft. May 2013
Mobile Microrobotics Winner, International Conference on Robotics and Automation. May 2013
Undergraduate Research Award, National and Engineering Research Council of Canada. May 2013
Undergraduate Research Award for Sustainable Energy Development, University of Waterloo. Jan 2013
Professional Engineers Foundation Scholarship, Professional Engineers of Ontario. June 2012
President Scholarship, University of Waterloo. September 2011
Highest Overall Average, Port Credit Secondary School. June 2011
Port Credit Alumni Excellence Award, Port Credit Secondary School. June 2011
Terry Garbutt Memorial Award, Port Credit Alumni Association. June 2011
Vice Principal Award in Technology Development, Port Credit Secondary School. June 2011
Ultimate Frisbee Gold Medal, Regional of Peel Sports Association. June 2011
Silver Medal in CNC Programming, Skills Ontario Competition. May 2011
Third Place Engineering Olympics, McMaster University. October 2010
Bronze Medal in Precision Machining, Regional Skills Ontario. May 2010
Fourth and Sixth Place Overall at Robotics, Skills Ontario. May 2008 & 2009

VOLUNTEER LEADERSHIP

World Community Grid Research Promotion Director and Team Captain. September 2011 - Present
Port Credit Secondary School Alumni Outreach and Motivational Speaker June 2010 - Present
City of Mississauga New Year's Eve Event Organizer & Area Site Plan Manager, 2011-2012
Student Design Symposium Organizer. May 2012