



Andrew Dworschak

Date of Birth: January 9, 1996

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EDUCATION

Bachelor of Applied Science in Engineering Physics, Minor in Entrepreneurship

Sept 2014 – May 2019

University of British Columbia (UBC), Vancouver BC, Canada

- Cumulative GPA: 92.3%.
- Credit units: 192.

CONFERENCES

- M. Zare, **A. Dworschak** and I.A. Frigaard “Onset of air invasion into an elastoviscoplastic fluid.” Poster presented at AERC 2018, Sorento, Italy, April 17-20, 2018.

RESEARCH EXPERIENCE

Technical Analyst

May 2018 – Present

Centre for Operations Excellence at the Sauder School of Business, UBC, Vancouver BC, Canada

- Researched and applied algorithms in machine learning and statistics to solve data-driven problems for our industry partners.
- Improved truck efficiency by interpreting mining activities as an optimization problem on a directed graph.
- Analyzed customer behaviour by applying filtering techniques to geospatial wi-fi data.
- Classified claimant text data using Word2Vec and Latent Dirichlet Allocation with informative priors.

Complex Fluids Research Engineer

May 2017 – Aug 2017

Fluid Mechanics Laboratory, UBC, Vancouver BC, Canada

- Performed experiments to describe the process of pressurized fluid invasion into a well of Carbopol gel.
- Developed a software system in C++ to control experimental equipment precisely and automate data collection.

ENTREPRENEURIAL EXPERIENCE

Automated Fitness Tracking with Machine Vision

July 2017 - Present

- Using depth-sensing cameras, my team prototyped an end-to-end solution to characterize a gym user's exercises, weights, and repetitions performed. This data is automatically uploaded to generate a fitness profile for the user.
- Used Python and TensorFlow for machine-vision. Used AWS, Swift and Flask to manage fitness profiles.
- Awarded the Bycast Award for Entrepreneurship for creating a product with exceptional business value - \$10,000.
- Awarded the UBC Design and Innovation Day Industry Award for a successful live demo - \$600.

Physics-Based iOS Applications

Dec 2015 – Dec 2016

- Launched the physics-based puzzle game SQNCE into the iOS App Store, generating revenue with an ad-server.
- Self-taught the Swift programming language and Model View Controller framework for application development.

Painting Franchise Owner

Oct 2014 – Aug 2015

- Managed hiring, training, marketing, sales, production and accounting.
- Generated \$50,000 in revenue and \$15,000 in net profit over a 3-month period.

OTHER PROFESSIONAL EXPERIENCE

Creative Engineer

Aug 2017 – Dec 2017

Logic & Form at the Indian Residential School History and Dialogue Centre, UBC, Vancouver BC, Canada

- Planned system architecture and developed software for an interactive digital museum.
- Gathered stakeholder feedback to help create an appropriate, educational history of Indian Residential Schools.

Biomedical Engineer

Jan 2016 – Apr 2016

Arbutus Medical, Vancouver BC, Canada

- Helped to develop low-cost surgical tools for use in developing countries.
- Leading R&D for the Drill Cover System 2, I invented mechanical components for the flagship drill cover product.

AWARDS AND HONOURS

University of British Columbia

- Captain C Y Wu Scholarship. Nov 2018
- Trek Excellence Scholarship. Sept 2015 – Sept 2018
- NSERC Undergraduate Student Research Award. May 2017 – Aug 2018
- Dean's Honour List. May 2015 – May 2018
- Carl and Elsie Halterman Scholarship. May 2018
- Charles and Jane Banks Scholarship. Oct 2017
- Jimmar Memorial Scholarship in Engineering. Oct 2016
- NSERC Industrial Undergraduate Student Research Award. Jan 2016 – Apr 2016
- Lorne Manning Hill Memorial Scholarship. Nov 2015
- British Columbia Provincial Scholarship. Sept 2014
- Chancellor's Scholar designation. June 2014

City of Richmond

- Richmond Sunrise Rotary Scholarship. June 2014
- Richmond Youth Basketball League Scholarship. June 2014
- U-ROC Award for Outstanding Youth Recreational Leaders. May 2013

Elite Mentors Association

- Future Young Scientist/Engineer Award - Elite Scientists and Engineers Mentorship Program. Jan 2014

COMPETITIONS

- RBC Get Seeded Competition: Funded Venture Nov 2018
- UBC Engineering Competition: 1st Place Senior Design. Oct 2018
- Canadian Engineering Competition: 2nd Place Senior Design. Mar 2017
- Western Engineering Competition: 2nd Place Senior Design. Jan 2017
- UBC Engineering Competition: 1st Place Senior Design. Oct 2016
- Canadian Engineering Competition: 4th Place Junior Design. Mar 2016
- Western Engineering Competition: 1st Place Junior Design. Jan 2016
- UBC Engineering Competition: 1st Place Junior Design. Oct 2015