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
- 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
- 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