Dave **Scott**

Machine Learning Engineer · Data Scientist

Zijing Apartment 20, Tsinghua University, Beijing 100084, P. R. China

(+86) 135-5220-1174 | davejscott@shaw.ca | davejscott | davejscott

Education

University of Alberta — *Edmonton, Canada*

M.Sc. in Computer Process Control Engineering · GPA **3.8**/4.0 — *Sep. 2017 - Current*

- Recieved **Alexander Graham Bell Canada Graduate Scholarship** – the **highest** level of scholarship for a Canadian Master's Scholar, **14 additional Awards** relating to Research in Machine Learning, Leadership and Mentorship

University of Alberta — *Edmonton, Canada*

B.Sc. in Chemical Engineering · GPA **3.7**/4.0 — *Sep. 2012 - Apr. 2017*

- Capstone Design Project, **1st Place**, **8 additional Awards** relating to Written and Oral Communication, Leadership, Academic Achievement

Summary

Driven and results-oriented M'Sc. Candidate graduating Fall 2019 with a keen interest in data science and machine learning. Deep expertise in developing machine learning algorithms for time-series applications that are utilized in industrial processes. An effective solutions-oriented developer, utilizing Python, RStudio, MATLAB, and TensorFlow. More than 2 years of work experience in adaptive environments creating innovative applications for data science, software engineering, CV, AI, and NLP applications.

Experience

Tsinghua University — *Beijing, China*

Machine Learning Engineer - Master's Exchange — *Feb. 2019 - Current*

- Solved a previously-unsolved data science problem by creating a robust signal-processing Machine Learning algorithm (MATLAB, Python), with direct industrial applications for >5 industries.
- Identified a previously unsolved data science problem for slow feature analysis (SFA) machine learning algorithm that was uncapable of generating insights from both non-stationary and stationary process data
- Developed a novel statistics formulation for SFA algorithm (MATLAB, Python) that utilized non-stationary and stationary process data, identifying and detected faults 20% faster and raising 35% less false alarms than the PCA, CVA, and PLS multivariate statistical process monitoring methods.
- Built fully automated modelling and monitoring pipelines (Scikit-learn, Tensorflow, MATLAB) for industrial process data, including backpropagation algorithms and intelligent model initialization.

University of Alberta — *Edmonton, Canada*

Computer & Machine Learning Research Engineer — *Sep. 2018 - Feb. 2019*

- Re-engineered fault detection software (Python) to analyse pump faults, creating a GUI interface for end-user to interact with the software.
- Implemented data mining and machine learning pipeline (Python, C++) for a Cloud Control System that contained 5000 variables.

Schlumberger Limited — *Tulsa, USA & Calgary, Canada*

Data Analytics Field Engineer, Intern — *Jun. 2018 - Jul. 2018*

- Optimized machine learning pipeline to detect 10 drilling faults from IoT devices, decreasing the required time for the drilling operation.
- Launched IoT solution for connecting data pipeline from microprocessors to satellites, delivering a solution to Chevron that eliminated inefficiencies and saved the client over $100,000 USD in lost time.

Canadian Natural Resources Limited — *Calgary, Canada*

Data Science & Controls Engineer, Co-op Student — *May. 2016 - Dec. 2016*

- Modelled and forecasted project progress of 80 capital projects into economic models and graphs (RStudio) to deliver key performance indicators for projects to senior management.
- Programmed project analytics software (VBA), reducing required time to upload project updates for project managers by over 30%.

Hackathons and Data Science Competitions

2019 **1st Place,** Tsinghua University and UNSW Data Science Competition — *Beijing, China*

2019 **1st Place,** Tsinghua University Internet of Things (IoT) Hackathon — *Beijing, China*

Interesting Experiences

Rapid Fire Controller e-Commerce Business *Edmonton, Canada*

Co-founder *April 2009*

- At age 13 I started my first eCommerce business. I modified Xbox 360 controllers in bulk using circuitry and electrical engineering principles, to make players more competitive than their peers. Grossed over $5,000 dollars USD in sales in one year.