Dave **Scott**

MACHINE LEARNING ENGINEER · DATA SCIENTIST

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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 Leadership, Mentorship, Academic Achievement

University of Alberta   *Edmonton, Canada*

B.Sc. IN CHEMICAL ENGINEERING   ·   GPA **3.7**/4.0   *Sep. 2012 - Apr. 2017*

- Capstone Design Project, **1st Place**, Graduated with Distinction, **8 additional Awards** relating to Communication, Leadership, Academic Achievement

Summary

Current Site Reliability Engineer at start-up company Kasa. 7+ years experience specializing in the backend development, infrastructure automation, and computer hacking/security. Super nerd who loves Vim, Linux and OS X and enjoys to customize all of the development environment. Interested in devising a better problem-solving method for challenging tasks, and learning new technologies and tools if the need arises.

Work Experience

Tsinghua University   *Beijing, China*

MACHINE LEARNING ENGINEER - MASTER'S EXCHANGE   *Feb. 2019 - Current*

- Solved a previously-unsolved data science problem by developing a robust signal-processing Machine Learning algorithm (MATLAB, Python), with direct industrial applications for over >5 industries.
- Derived a novel statistics formulation for non-stationary and stationary process data that identified and detected faults 20% faster and raised 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. 2017 - Feb. 2019*

- Developed fault detection software to analyse pump faults, creating a simple GUI interface for end-user to interact with the software.
- Managed a client project to implement data mining and machine learning pipeline (KnowledgeNet Analytics, C++) for a Cloud Control System that contained over 5000+ process variables.

Schlumberger Limited   *Tulsa, USA & Calgary, Canada*

DATA ANALYTICS FIELD ENGINEER, INTERN   *Jun. 2018 - Jul. 2018*

- Analysed process data from drilling measurement tools to detect 10 drilling faults and provided adjustments for engineers, decreasing the required time for the drilling operation.
- Diagnosed and designed IoT disconnections, delivering solutions for inefficiencies and saving the client over $150,000 USD in lost time, while enhancing site communication and safety.

Canadian Natural Resources Limited   *Calgary, Canada*

DATA SCIENCE & CONTROLS ENGINEER, CO-OP STUDENT   *Jan. 2013 - Feb. 2013*

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

ShitOne Corp.   *Seoul, S.Korea*

SOFTWARE ENGINEER   *Dec. 2011 - Feb. 2012*

- Developed a proxy drive smartphone application which connects proxy driver and customer.
- Implemented overall Android application logic and wrote API server for community service, along with lead engineer who designed bidding protocol on raw socket and implemented API server for bidding.

SAMSUNG Electronics   *S.Korea*

FREELANCE PENETRATION TESTER   *Sep. 2013, Mar. 2011 - Oct. 2011*

- Conducted penetration testing on SAMSUNG KNOX, which is solution for enterprise mobile security.
- Conducted penetration testing on SAMSUNG Smart TV.

Hackathons and Data Science Competitions

INTERNATIONAL

2019	**1st Place**, Tsinghua University and UNSW Data Science Competition	*Beijing, China*
2019	**1st Place**, Tsinghua University Internet of Things (IoT) Hackathon	*Beijing, China*

DOMESTIC

2018	**Leadership Award**, International Society of Automation, World Student Games	*Calgary, Canada*
2018	**2rd Place**, International Society of Automation, Edmonton Student Games	*Edmonton, Canada*

Extracurricular Activity

PoApper (Developers' Network of POSTECH) *Pohang, S.Korea*

CORE MEMBER & PRESIDENT AT 2013 *Jun. 2010 - Jun. 2017*

- Reformed the society focusing on software engineering and building network on and off campus.
- Proposed various marketing and network activities to raise awareness.

PLUS (Laboratory for UNIX Security in POSTECH) *Pohang, S.Korea*

MEMBER *Sep. 2010 - Oct. 2011*

- Gained expertise in hacking & security areas, especially about internal of operating system based on UNIX and several exploit techniques.
- Participated on several hacking competition and won a good award.
- Conducted periodic security checks on overall IT system as a member of POSTECH CERT.
- Conducted penetration testing commissioned by national agency and corporation.