Lyndon **Chan**

DATA SCIENTIST · MACHINE LEARNING RESEARCHER

Markham, ON, Canada

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Summary

Data Scientist at end-to-end data start-up Alphabyte Solutions. 3+ years of academic research experience specializing in computer vision, machine learning, and web scraping. 1+ years of professional experience in software development, testing, and automation. Passionate about applying diverse state-of-the-art machine learning models (computer vision, NLP, time-series, geospatial) to solve practical business problems and developing new technologies if the need arises.

Skills

Expertise	Machine Learning (regression, neural networks, abnormality detection), Computer Vision (classification CNN, detection, segmentation), NLP (search engine, NER), Time-Series Analysis (RNN, forecasting)
Programming	Python, MATLAB, C/C++, Java, R
ML/Data Science	Keras, TensorFlow, PyTorch, NumPy, Scikit-learn, Pandas, Power BI
DevOps	Git, GitHub, SQL, SQL Server, Azure, REST API
Languages	English (native), Cantonese (fluent), Mandarin (proficient)

Education

University of Toronto — *Toronto, Ontario, Canada*

M.A.Sc. IN ELECTRICAL ENGINEERING — *Sep 2017 - Jun 2020*

Topics: computer vision (projective geometry, motion analysis), probability theory, signal processing (linear filtering, spectral analysis), optimization theory (linear programming)

University of Toronto — *Toronto, Ontario, Canada*

B.A.Sc. IN ELECTRICAL ENGINEERING (WITH HONOURS) — *Sep 2012 - Jun 2017*

- GPA: 3.64 / 4.0 (17th of 129)
- Topics: machine learning (regression, neural networks, Bayesian models), operating systems, image processing, electronics

Work Experience

Alphabyte Solutions — *Vaughan, Ontario, Canada*

DATA SCIENTIST — *May 2020 - present*

- Implemented an adaptable labour forecasting algorithm using Scikit-learn, Flask, RESTful API, and SQL.

University of Toronto (Multimedia Lab) — *Toronto, Ontario, Canada*

GRADUATE RESEARCHER — *Sep 2017 - May 2020*

- Developed novel semantic segmentation algorithm, evaluated state-of-the-art segmentation techniques, compiled image dataset for computational pathology tool with Huron Digital Pathology–yielding Canadian patent, two conference publications.
- Advised LG Science Park on development of anomaly detection tool for industrial images.

University of Toronto (Multimedia Lab) — *Toronto, Ontario, Canada*

UNDERGRADUATE RESEARCHER — *May 2017 - Aug 2020*

- Designed novel image classification network with fixed maximally-polynomial kernels, and optimized for efficient training on limited pathology images–resulting in a conference paper submission.

Qualcomm Canada — *Markham, Ontario, Canada*

INTERIM ENGINEERING INTERN — *May 2015 - Aug 2016*

- Built unit/functional test frameworks for optical flow, cadence detection, image sharpening, and compression (OpenCV, C/C++).
- Operated image quality assessment and camera calibration lab, and competed in two internal hackathons (Arduino, ROS).

Hong Kong University of Science and Technology (Human Language Technology Centre) *New Territories, Hong Kong*
UNDERGRADUATE VISITING RESEARCH INTERN *Jun 2014 - Aug 2014*
- Implemented web scraping bot (Selenium, Python), unsupervised clustering of user personalities by country from OkCupid (Scikit-learn, PCA).
- Performed social media post scraper from Sina Weibo (Web API, Python), analyzed song popularity.

Community Involvement

RESEARCH

2021	**Reviewer**, IEEE Winter Conference on Applications of Computer Vision (WACV)	*Waikoloa, HI, U.S.A*
2020	**Reviewer**, Asian Conference on Computer Vision (ACCV)	*Kyoto, Japan*
2020	**Reviewer**, IEEE Conference on Computer Vision and Pattern Recognition (CVPR)	*Seattle, WA, U.S.A*

EDUCATION

2019	**Head Teaching Assistant**, ECE1512: Digital Image Processing and Applications	*Toronto, Ontario, Canada*
2018	**Head Teaching Assistant**, ECE462: Multimedia Systems	*Toronto, Ontario, Canada*

Honours & Awards

INTERNATIONAL

2019	**Conference Grant (School of Graduate Studies)**, CVPR	*Long Beach, CA, U.S.A*
2014	**Centre For International Experience Grant**, Summer Research Exchange	*New Territories, Hong Kong*

DOMESTIC

2018 - 2019	**University Of Toronto Fellowship**, Dept. of Electrical & Computer Engineering	*Toronto, Ontario, Canada*
2018	**Teaching Assistant Award**, ECE Student Club	*Toronto, Ontario, Canada*
2017 - 2018	**Edward S. Rogers Sr. Graduate Scholarship**, Dept. of Electrical & Computer Engineering	*Toronto, Ontario, Canada*
2017	**Undergraduate Student Research Award**, NSERC	*Toronto, Ontario, Canada*
2017	**Gordon R Slemon Capstone Design Award**, Dept. of Electrical & Computer Engineering	*Toronto, Ontario, Canada*
2012 - 2017	**Dean's List**, Faculty of Applied Science & Engineering	*Toronto, Ontario, Canada*
2012	**Edward S Rogers Sr. Admission Scholarship**, Dept. of Electrical & Computer Engineering	*Toronto, Ontario, Canada*