

# LYNDON CHAN

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## INTERESTS AND SKILLS

- **Topics:** Machine Learning, Computer Vision, Abnormality Detection, Weakly-Supervised Semantic Segmentation (WSSS), Computational Pathology
- **Programming:** Python (Keras, TensorFlow, Caffe), MATLAB, C/C++, Java, Ruby, R
- **Software:** L<sup>A</sup>T<sub>E</sub>X, Jupyter Notebook, Windows Shell, Wiki Markup
- **Languages:** English (native), Cantonese (fluent), Mandarin (conversational)

## EDUCATION

### M.A.Sc., Electrical Engineering

University of Toronto

2017-present (Jun. 2020 graduation)

Toronto, Ontario, CANADA

COURSES: Foundations of Computer Vision (CSC2503H), Random Processes (ECE537H1), Signal Processing (ECE1512H), Convex Optimization (ECE1505H), Object Modelling and Recognition (CSC2523H)

### B.A.Sc., Electrical Engineering (GPA 3.64 / 4.0, 17th of 129)

University of Toronto

2012-2017

Toronto, Ontario, CANADA

FOCUS AREAS: "Control, Communications & Signal Processing", "Analog & Digital Electronics", "Software"

## WORK EXPERIENCE

### University of Toronto (Multimedia Lab)

Master's Student Research Assistant

Toronto, Ontario, CANADA

Sep. 2017-present

- Developed WSSS method, compiled image dataset, mathematical derivation of CNNs
- Administered lab research meetings, served as CVPR2020 student reviewer
- Served as head lab TA for undergraduate-level course on image processing and compression (ECE462: Multimedia Systems) and graduate-level course on CNN classification (ECE1512: Digital Image Processing and Applications)

Undergraduate Student Research Assistant

May 2017-Aug. 2017

Designed novel classification network with fixed maximally-polynomial kernels

### Qualcomm Canada

Interim Engineering Intern

Markham, Ontario, CANADA

May 2015-Aug. 2016

Built testing frameworks for image/video processing and compression; performed subjective image quality assessment; operated camera calibration lab; competed in two internal hackathons

OKCupid user personality clustering by nationality, song popularity prediction on Sina Weibo

## PUBLICATIONS

### JOURNAL PAPERS

1. "A Comprehensive Analysis of Weakly-Supervised Semantic Segmentation in Different Image Domains," **International Journal of Computer Vision (IJCV)**, 2020. (pre-print) (code)
2. "Focus Quality Assessment of High-Throughput Whole Slide Imaging in Digital Pathology," **IEEE Transactions on Medical Imaging (TMI)**, 2019. (paper) (code)

### CONFERENCE PAPERS

1. "Can Histology Knowledge be Transferred for Histopathology Analysis?," **Conference on Computer Vision and Pattern Recognition (CVPR)**, 2020. (submitted)
2. "HistoSegNet: Semantic Segmentation of Histological Tissue Type in Whole Slide Images," **International Conference on Computer Vision (ICCV)**, 2019. (paper) (code)
3. "Atlas of Digital Pathology: A Generalized Hierarchical Histological Tissue Type-Annotated Database for Deep Learning," **Conference on Computer Vision and Pattern Recognition (CVPR)**, 2019. (paper) (website)

## AWARDS

- 2019: **Conference Grant** (School of Graduate Studies)
- 2018-2019: **University Of Toronto Fellowship** (Department of ECE)
- 2018: **Teaching Assistant Award** (ECE Student Club)
- 2017-2018: **Edward S. Rogers Sr. Graduate Scholarship** (Department of ECE)
- 2017: **Undergraduate Student Research Award** (NSERC)
- 2017: **Gordon R Slemon Capstone Design Award** (Department of ECE)
- 2014: **Centre For International Experience Grant**
- 2012-2017: **Dean's List** (Faculty of Applied Science & Engineering)
- 2012: **Edward S Rogers Sr. Admission Scholarship** (Department of ECE)