LYNDON CHAN

☎ 647-330-1294 (mobile) | ✉ lyndon.chan@mail.utoronto.ca
lyndonchan.github.io | github.com/lyndonchan

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:** LaTeX, Jupyter Notebook, Windows Shell, Wiki Markup
- **Languages:** English (native), Cantonese (fluent), Mandarin (conversational)

Education

M.A.Sc., Electrical Engineering 2017-present (Jun. 2020 graduation)
University of Toronto 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) 2012-2017
University of Toronto Toronto, Ontario, CANADA

Focus Areas: "Control, Communications & Signal Processing", "Analog & Digital Electronics", "Software"

Work Experience

University of Toronto (Multimedia Lab) Toronto, Ontario, CANADA
Master's Student Research Assistant 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 Markham, Ontario, CANADA
Interim Engineering Intern 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

Hong Kong University of Science and Technology (Human Language Technology Centre)
Clear Water Bay, New Territories, HONG KONG
Undergraduate Visiting Research Intern Jun.-Aug. 2014

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)
- 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)