Brenna Li

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Education

02/2020 -	**University of Toronto (St. George Campus)** PhD Student in Computer Science, DGP Lab (HCI, Healthcare, Machine learning) Advisor: Professor Khai Truong
09/2018 - 01/2020	**University of Toronto (St. George Campus)** Master Student in Computer Science, DGP Lab Advisor: Professor Khai Truong
2012 - 2017	**University of British Columbia (Vancouver Campus)** B.Sc. Integrated Sciences – Computer Science, Neuroscience, Human Physiology Advisor: Professor Paul Pavlidis

Awards and Recognition

2019	**Mitacs Accelerate** Industry partnership research award ($15000)
2015	**Natural Sciences and Engineering Research Council of Canada (NSERC)** Undergraduate Student Research Award ($4500)
2015	**IEEE World Haptics Conference 2015 Chicago** 1st place in TPad Android Student Innovation Challenge ($1500)
2012- 2017	**University of British Columbia, Faculty of Science, Dean's Honour List** Recognition of students with strong academic standing

Presentations and Publications

Publications

1) **Brenna Li**, Noah Crampton, Sophie Yu, Simon Tian and Khai Truong. *Automating Clinical Documentation with Digital Scribes: Understanding the Impact on Physicians.* Conditional Acceptance for 2021 ACM SIGCHI Conference.
2) Yuyang Liu, Jienan Yao, **Brenna Li,** Zhen Gou, Chloe Pou-Prom, Joshua Murray, Amol Verma, Muhammad Mamdani and Marzyeh Ghassemi *Visualization of deep models on nursing notes and physiological data for predicting health outcomes through temporal sliding windows*. 2020 AAAI Conference's Health Intelligence Workshop.
3) Lillio Mok, **Brenna Li,** and Stephen Gou. *Understanding and Correcting Inaccurate Calorie Estimations on Amazon Mechanical Turk.* In Extended Abstracts of the 2019 CHI Conference on Human Factors in Computing Systems May 2019.
4) Mancarci, B.O.**,** Toker, L., Tripathy, S.J., **Li, B.**, Rocco, B.R., Sibille, E.L., Pavlidis, P. *Cross-laboratory analysis of brain cell type transcriptomes with applications to interpretation of bulk tissue data.* eNeuro Nov 2017
5) Shreejoy Tripathy, Lilah Toker, **Brenna Li,** Cindy Crichlow, Dimitry Tebaykin, Ogan B. Mancarci, Paul Pavlidis. *Transcriptomic correlates of neuron electrophysiological diversity.* PLoS Comput Biol. Oct 2017

Research Experience and Technical Projects

09/2020-12/2020 **Graduate Topics in HCI: Ubiquitous Computing in Assistive Technology (CSC2526)**
Designed a prototype to explore the usage of complimenting speech-based and gaze interaction for web-based navigation.

09/2020-12/2020 **Graduate Topics in HCI: Information Visualization (CSC2537)**
Designed a prototype tool for visualizing textual change in a document that includes information on when, where, how and why the document was modified across a timeline.

01/2019-04/2019 **Graduate Topics in Robotics: Imitation Learning for Robotics (CSC2621)**
Worked on inferring user intention on a website navigation task through theories of inverse reinforcement learning.

01/2019-04/2019 **Graduate Topics in Machine Learning: Machine Learning for Health (CSC2541)**
Worked on applying abbreviation and document embedding techniques on unstructured nursing notes to predict patient mortality and ICU transfer with St. Michael's Hospital General Internal Medicine data. AAAI 2020 Health Intelligence Workshop.

09/2018-12/2018 **Designing Intelligent Self-Improving Systems Through Human Computation, Randomized A/B Experiments and Statistical Machine Learning (CSC2558)**
Worked on understanding and correcting people's calorie predictions on common food groups through Amazon Mechanical Turk. Published in CHI 2019 Late Breaking Work.

Work Experience

09/2018 - Present **University of Toronto – Computer Science Department Teaching Assistant**
Taught courses CSC108, CSC207, CSC318, which ranges from first year introduction to python programming, to third year Human Computer Interaction design principles.

2017 – 2018 **BC Cancer Agency Genome Science Centre – Full time Computational Biologist**
Developer on the Laboratory Information Management System team. Develop features to track laboratory submissions. Provide support in data management, and data analysis using Python, SQL and R.

Developed a central authentication service for all webservices at the Genome Science Centre (GSC) in javascript using expressJS

2014 - 2017 **UBC Dr. Paul Pavlidis Lab – Part-time Neuroinformatics Research Assistant**
Conducted a literature data analysis project on neuron naming characteristics from the *NeuroElectro* database using Python and R. neuroelectro.org

Lead and managed a team of undergraduate students in performing data collection, curation, and analysis on neuron electrophysiology and gene expression databases, *NeuroElectro* and *Gemma*. neuroelectro.org, Gemma

Community Involvement

2019 – Present	HerCodeCamp – Intro to coding workshop for high school students – Director of Finance
2019 – Present	University of Toronto DGP Lab – Social Events Coordinator
2018 – Present	Computer Science Graduate Student Society at University of Toronto – Social Coordinator
2019	CHI 2019 Conference Student Volunteer
2013 – 2017	UBC Korle-Bu Neuroscience Club - President
2014 – 2017	University of British Columbia Hospital – Volunteer
2015 – 2016	Vancouver High School Biomedical Engineering Symposium – Organizer
2014 & 2016	Hacking Health and eHealth Conference – Volunteer