LEI (JADE) YU

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EDUCATION

University of Toronto, Toronto, Canada *September 2019 - Present*
M.Sc. in Computer Science GPA: 4.00/4.00
Research Specialization: Natural Language Processing, Cognitive Science
Supervisor: Prof. Yang Xu
Focus: Natural Language Understanding, Computational Semantics

McGill University, Montreal, Canada *September 2016 - May 2019*
B.Sc. with Joint Major in Computer Science and Statistics GPA: 3.93/4.00

RESEARCH EXPERIENCE

Cognitive Lexicon Laboratory, University of Toronto September 2019 - Present
Graduate Research Assistant *Supervisor: Prof. Yang Xu*

· Building computational models to predict and analyze word class conversion
· Constructing transformer-based framework that infers language symmetry and systematicity

Montreal Computational and Quantitative Linguistics Lab January 2019 - June 2019
Undergraduate Research Assistant *Supervisor: Prof. Timothy O'Donnell*

· Constructed a speech recognition system by applying Bayesian Deep Neural Embedding (BANDE) technique (together with Kelsey Allen from MIT Computational Cognitive Science Lab).

McGill Laboratory for Natural and Simulated Cognition September 2018 - January 2019
Undergraduate Research Assistant *Supervisor: Prof. Thomas Shultz*

· Designed on a computational model that simulates humans ability to actively seek for useful information to improve learning performance. Work published in CogSci 2019 conference.

Mila - Montreal Institute for Learning Algorithms May 2018 - December 2018
Undergraduate Research Assistant *Supervisor: Prof. Jackie Cheung*

· Developed a natural language processing system on deep abstractive text summarization through domain adaptation and sentiment analysis.

TEACHING EXPERIENCE

COMP 424 (Artificial Intelligence), McGill University January 2019 - April 2019
Teaching Assistant

· Designed assignments and held tutorials on Hidden Markov Models, reinforcement learning and utility theories.

CSC 148 (Introduction to Computer Science), University of Toronto September 2019 - December 2019
Teaching Assistant

· Hold teaching labs tutoring basic data structures and algorithms

CSC 311 (Introduction to Machine Learning), University of Toronto January 2020 - April 2020
Teaching Assistant

· Hold tutorials on hidden Markov models, Bayesian inference and reinforcement learning.

PUBLICATIONS

Lei Yu, Ardavan S. Nobandegani, Thomas Shultz. Neural Network Modeling of Learning to Actively Learn. *In Proceedings of the 41st Annual Meeting of the Cognitive Science Society. (CogSci2019)*
Lei Yu, Lana El Sanyoura, Yang Xu. How nouns surface as verbs: Inference and generation in word class conversion. *In Proceedings of the 42nd Annual Meeting of the Cognitive Science Society. (CogSci2020)*

INVITED TALKS

McGill Laboratory for Natural and Simulated Cognition December 2018

Learning How to Actively Learn

Psycholinguistics Research Group, University of Toronto January 2020

A Generative Framework of Noun-Verb Conversions

KEY SKILLS

Programming Languages	Python (Pytorch, Tensorflow), Java, C++, R, Matlab
Mathematical Skills:	Probability Theories, Statistical Learning Theories, Differential Equations, Convex Optimization
Machine Learning	Deep Learning, Bayesian Machine Learning, Reinforcement Learning
Natural Language Processing	Novel Language Generation, Automatic Text Summarization, Sentiment Analysis
Computational Cognitive Science	Bayesian Program Learning, Probabilistic Generative Models
Others	Quantum Computing
Natural Languages	Mandarin Chinese (Native), English (Proficient), French (Intermediate)

AWARDS

McGill Science Undergraduate Research Award (SURA) Summer 2018

McGill Deans Honour List Fall 2017, Winter 2018

McGill In-course Scholarship Awards Winter 2017, Winter 2018

McGill Undergraduate Entrance Scholarship Fall 2016