CMPT 882 - G100 Special Topics in Artificial Intelligence

Instructor(s): Anoop Sarkar

SFU Burnaby

Calendar Objective/Description:
None

Instructor's Objectives:
This is a special topics course entitled "Neural Machine Translation".

This is an advanced graduate seminar course about recursive neural network models for machine translation (for natural languages such as English, Chinese, Tagalog, etc.). You will require some background in NLP. The main goal of the course will be to do original research on encoder-decoder recursive neural networks. The course will cover recent developments in neural machine translation and we hope to discuss and solve current limitations of NMT.

Prerequisites:
None

Topics:
- Statistical machine translation
- Neural network feature functions in SMT
- Neural language models
- Training recursive neural networks
- Encoder-decoder networks
- Attention
- Extensions to Attention
- Convolutional networks in NMT
- Reinforcement learning ideas applied to NMT

Grading:
60% for in class presentations. 40% for final project. There is no midterm or final exam.

Academic Honesty Statement:
Academic honesty plays a key role in our efforts to maintain a high standard of academic excellence and integrity. Students are advised that ALL acts of intellectual dishonesty will be handled in accordance with the SFU Academic Honesty and Student Conduct Policies (http://www.sfu.ca/policies/gazette/student.html).