Bo-Ru (Roy) Lu

University of Washington
Seattle, WA

Phone: +1 510-424-1911
Email: roylu@uw.edu
Homepage: boru-roylu.github.io/

Research Interests

Deep learning and its applications on natural langauge generation and understanding.

Education

- **University of Washington**, Seattle, WA — Sep. 2018 - present
  Ph.D. in Electrical & Computer Engineering
  Advisor: Prof. Mari Ostendorf
- **National Taiwan University**, Taipei, Taiwan — Sep. 2016 - Jul. 2018
  M.S. in Communication Engineering
  Advisor: Prof. Lin-Shan Lee & Prof. Hung-Yi Lee
  Overall GPA: 4.00/4.00
  Relevant coursework GPA: 4.00/4.00
- **National Taiwan University**, Taipei, Taiwan — Sep. 2012 - Jun. 2016
  B.S. in Electrical Engineering
  Overall GPA: 3.65/4.00
  Last 60 GPA: 4.00/4.00
  Relevant coursework GPA: 4.00/4.00

Publications

- **B.-R. Lu**, F. Shyu, Y.-N. Chen, H.-Y. Lee, L.-S. Lee. "Order-Preserving Abstractive Summarization for Spoken Content Based on Connectionist Temporal Classification," in INTERSPEECH 2017.

Research Experiences

- **Applied research intern**, NLP team, Apple Inc., Cupertino, CA — Jan. 2018 - Apr. 2018
  Manager: Dr. Jerome Bellegarda & Xin Wang
  Improved and developed IOS input methods.
- **Research assistant**, Speech Processing Lab, NTU, Taipei, Taiwan. — Feb. 2015 - Jul. 2016
  phoneme recognition & attention-based models for text documents and spoken content.
- **Second-Round Reviewer**
  INTERSPEECH 2017, ICASSP 2017, ICJNLP 2017, EMNLP 2017.

Awards and Honors

- **Government Scholarship for Studying Abroad**, Ministry of Education — Sep. 2018
- **Hsing Tian Kong Long-Term Fellowship for Cultivating Elite Students**, Hsing Tian Kong — Dec. 2017
  Fellowship to support elite students with acceptance rate of 0.1%.
- **Advanced Speech Technologies Scholarship**, NTU — Sep. 2017
  Recognizes students with excellent academic performance in speech processing (3 recipients in the year).
- **International Speech and Communication Association Student Travel Grants**, ISCA — Aug. 2017
- **NTU Electrical Engineering 1960 Alumni Scholarship**, NTU — Sep. 2015
  Recognizes undergraduates in EE with excellent academic performance (2 recipients a year).

Teaching Experiences

- **CSIE 5440, Intelligent Conversational Bot** Jan. 2017 - Jun. 2017
  Instructor: Prof. Yun-Nung (Vivian) Chen
  Guided and advised students to develop their chatbot systems.
- **EE 5177, Machine Learning** Sep. 2016 - Jun. 2017
  Instructor: Prof. Hung-Yi Lee
  Lead TA: led the team of 13 TAs and tutored 278 students in the course.
  Built the automatic grading system to grade programming assignments and speed up the grading process.
- **CSIE 5431, Applied Deep Learning** Sep. 2016 - Jan. 2017
  Instructor: Prof. Yun-Nung (Vivian) Chen
  Taught students deep reinforcement learning and designed a DQN programming assignment.

Selected Term Projects

- **Movie Bot** Jun. 2017
  CSIE 5440, Intelligent Conversational Bot
  Conditional language generation: generated a sentence according to users' current emotion.
- **Visual Question Answering** Jan. 2016
  CommE 5045, Machine Learning and Having It Deep and Structured
  Designed a combined network of LSTM and CNN for answering multiple-choice questions about images.
- **Spoken Term Detection Using Dynamic Time Wrapping** Jun. 2015
  EE 4049, Introduction to Digital Speech Processing.
  Modified and designed a DTW algorithm to reduce retrieval time without reducing performance.

Relevant Coursework

- **Machine Learning and langauge & speech processing**
  Digital Speech Processing*, Applied Deep Learning*, Deep and Structured Learning*, Intelligent Conversational Bot*, Machine Learning*, Data Science*, Web Retrieval and Mining*, Multimedia Analysis and Indexing*
- **Computer Science**
  Operating Systems, Systems Programming, the Design and Analysis of Algorithms*, Algorithms, Data Structure, Embedded System, Computer Networks, Introduction to Computer, Computer Programming

* donotes graduate-level course.

Skills

- **Languags:** Mandarin (native), English (professional working proficiency)
- **Programming Languages:** Python (familiar), Shell Script (familiar), C/C++, LaTeX
- **Tools:** PyTorch, Tensorflow, Keras, Kaldi