JAY YOON LEE

Postdoctoral Research Associate, College of Information & Computer Sciences, UMass Amherst
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EDUCATION

CARNEGIE MELLON UNIVERSITY, (CSD) May.2013 – July.2020
Ph.D. in Computer Science (GPA: 3.95 / 4.3) Advisor: Jaime Carbonell
Jay-Yoon Lee, "*Injecting output constraints into neural NLP models*," Ph.D. thesis,
Committee: Jaime Carbonell, William Cohen, Graham Neubig, Yulia Tsvetkov, Dan Roth.

CARNEGIE MELLON UNIVERSITY, (LTI & LCCB) Sept.2011– May.2013
M.S. in Computer Science (GPA: 3.95 / 4.3)

KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY (KAIST) Mar.2003 – 2008
B.S. in Electrical Engineering, *summa cum laude*, 2008 (GPA: 3.94 / 4.3)

RESEARCH EXPERIENCE

Postdoctoral Research Associate under Professor Andrew McCallum July.2020- Present
Injecting known constraints to neural models; Energy-based models and Box representations that can automatically capture label dependencies and logical constraints.

Research Assistant under Professor Jaime Carbonell Oct.2015 –July.2020
Semi-supervised learning for low-resource and domain transfer using constraint injection.
Demand forecasting and part price prediction, *Boeing sponsored research.*

Research Assistant under Professor Christos Faloutsos June.2012 –Oct.2015
Anomaly detection algorithm on large graphs. *DARPA ADAMS*.

SELECTED PUBLICATIONS

1. **Jay-Yoon Lee***, KyungTae Lim*, Jaime Carbonell, Thierry Poibeau*, Semi-Supervised Learning on Meta Structure: Multi-Task Tagging and Parsing in Low-Resource Scenario,* **AAAI 2020** (*: equal contribution)
2. **Jay-Yoon Lee**, Sanket Mehta, Michael Wick, Jean-Baptiste Tristan, Jaime Carbonell,*Gradient-based Inference for Networks with Output Constraints,* **AAAI 2019**
3. **Jay-Yoon Lee***, Sanket Mehta*, Jaime Carbonell*, Towards Semi-Supervised Learning for DeepSemantic Role Labeling,* **EMNLP 2018** (*: equal contribution)
4. **Jay-Yoon Lee*,** Manzil Zaheer*, Stephan Günnemann, Alex Smola, *Preferential Attachment in Graphs with Affinities,* **AISTATS 2015** (*: equal contribution)
5. EunJeong Hwang, **Jay-Yoon Lee**, Tianyi Yang, Dhruvesh Patel, Dongxu Zhang, Andrew McCallum, *Event-Event Relation Extraction using Probabilistic Box Embedding,* **ACL 2022**
6. Dhruvesh Patel, Pavitra Dangati, **Jay-Yoon Lee**, Michael Boratko, Andrew McCallum *Modeling label space interactions in MLC using box embeddings*, **ICLR2022**
7. Zhiyang Xu, Andrew Drozdov, **Jay-Yoon Lee**, Tim O'Gorman, Subendhu Rongali, Dylan Finkbeiner, Shilpa Suresh, Mohit Iyyer, Andrew McCallum, *Improved Latent Tree Induction with Distant Supervision via Span Constraints*, **EMNLP 2021**
8. Vidhisha Balachandran, Artidoro Pagnoni, **Jay-Yoon Lee**, Dheeraj Rajagopal, Jaime G Carbonell, Yulia Tsvetkov, *StructSum: Summarization via Structured Representations,* **EACL 2021**
9. Rajarshi Das, Manzil Zaheer, Dung Thai, Ameya Godbole, Ethan Perez, **Jay-Yoon Lee**, Lizhen Tan, Lazaros Polymenakos, Andrew McCallum, *Case-based Reasoning for Natural Language Queries over Knowledge Bases,* **EMNLP 2021**

TEACHING

Teaching Assistant for Multimedia Databases and Data Mining Fall 2014
Teaching Assistant for Machine Learning (Ph.D. course) Spring 2015

GRADUATE COURSE

Deep Reinforcement Learning, Deep Learning, Statistical Machine Learning, Convex Optimization, Spectral Graph Theory, Intermediate Statistics, Multimedia Databases and Data Mining, Advanced Probability Overview

INDUSTRY EXPERIENCE

Google AI, New York, NY, Tag-constrained Transformer for text normalization.
Research Internship with Hao Zhang, ***Language and Speech***, Oct.2019 – Jan.2020
Microsoft Research, Redmond, WA, Combinatorial action RL for task-oriented dialogue.
Summer Internship with Sungjin Lee, Jianfeng Gao, ***Deep Learning group*** May.2019 – Aug.2019
Microsoft Research, Redmond, WA, Improving conversation using multiple metrics.
Summer Internship with Paul Bennett, ***Information and Data Sciences***, June.2017 – Aug.2017
Oracle Labs, Burlington, MA, Syntactic parsing with output constraint on seq2seq.*Summer Internship*, with Michael Wick, ***IRML group***, June.2016 – Aug.2016

HONORS & AWARDS

1. Scholarship in Science & Technology, Korea Student Foundation Mar.2003 – Feb.2008
2. Scholarship in Mathematics, Korea Foundation of Advanced Studies Mar.2005 – Feb.2008