

Dong-Ho Lee

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Education

University of Southern California (USC)

M.S. in Computer Science

- Advisor: [Dr. Xiang Ren](#)

Los Angeles, United States

Aug. 2018 - May. 2020

Sungkyunkwan University (SKKU)

B.S. in Computer Education

- Total GPA: 4.10/4.5 (Major GPA: 4.26/4.5)

Seoul, Republic of Korea

Mar. 2012 - Feb. 2018

Sheffield University

Exchange program in Computer Science

Sheffield, United Kingdom

Sep. 2016 - Feb. 2017

Experience

Information Sciences Institute, USC

Research Programmer I (Full time)

- Research Programmer supervised by [Dr. Ralph Weischedel](#)
- Working on MCS (DARPA) project. I am developing ways to mine the www for Commonsense knowledge that could be applied to diverse subject areas.
- Working on LESTAT (DARPA) project. To understand a complex event, we are organizing typical sequence of actions in format of schema. I am currently developing event order suggestion and event summarization modules in the team.

Los Angeles, United States

Sep. 2020 - PRESENT

Singapore University of Technology and Design (SUTD)

Visiting Researcher

- Project Leader of Academic assisted writing under [Dr. Roy Ka-Wei Lee](#)
- Aims to implement Academic Assisted Writing tool that provides real-time suggestions.
- Project goal is to provide appropriate real-time suggestions based on academic discipline—sociology, medicine, engineering, computer science, etc.—as well as the various sections of an academic paper such as the abstract, introduction, and conclusion.

Singapore

May. 2020 - PRESENT

Information Sciences Institute / Department of Computer Science, USC

Student Research Worker

- Project Leader in INK (Intelligence and Knowledge Discovery Research) lab
- Implemented concept-aware language model that can pack more commonsense knowledge into the parameters of a pre-trained text-to-text transformer without relying on external knowledge graphs, yielding better performance on commonsense benchmark datasets.
- Leveraged the performance of low-resource Information Extraction by finding meaningful supervision and unifying those multiple weak signals into various tasks such as Named Entity Recognition, Relation Extraction, and Sentiment Analysis.
 - **[ACL 2019/2020]** Implemented a web-based annotation framework for sequence labeling and classification tasks that can dynamically suggest annotations with active learning and label efficient learning from natural language explanations for each labeling decision. ([Project Website](#))
 - **[ACL 2020]** Introduced entity triggers, an effective proxy of human explanations for facilitating label-efficient learning of Named Entity Recognition models, and proposed a trigger matching network, which jointly learns trigger representations and soft matching module with self-attention that can generalize to unseen sentences easily for tagging of conventional supervised approaches using 70% training data.
 - Worked on MACROSCORE (DARPA) project, which aims to discover the reproducibility of scientific articles. I implemented feature extraction framework, which elicits features that can help to determine the reproducibility.

Los Angeles, United States

Nov. 2018 - PRESENT

Publications

* These authors contributed equally

Preprints

[1] Pre-training Text-to-Text Transformers for Concept-centric Common Sense

Wangchunshu Zhou*, **Dong-Ho Lee***, Ravi Kiran Selvam, Seyeon Lee, Bill Yuchen Lin, Xiang Ren
[SSL@NIPS 2020] NeurIPS 2020 Workshop on Self-Supervised Learning: Theory and Practice.

[2] ForecastQA: A Question Answering Challenge for Event Forecasting

Woojeong Jin, Suji Kim, Rahul Khanna, **Dong-Ho Lee**, Fred Morstatter, Aram Galstyan, and Xiang Ren

Research papers in conference proceedings

[3] TriggerNER: Label-Efficient Learning for Named Entity Recognition via Annotating Entity Triggers

Bill Yuchen Lin*, **Dong-Ho Lee***, Ming Shen, Ryan Moreno, Xiao Huang, Prashant Shiralkar and Xiang Ren
[ACL 2020] Proceedings of the 58th Annual Meeting of the Association for Computational Linguistics, pp.372-379.

[4] LEAN-LIFE: A Label-Efficient Annotation Framework Towards Learning from Annotator Explanation

Dong-Ho Lee*, Rahul Khanna*, Bill Yuchen Lin, Jamin Chen, Seyeon Lee, Qinyuan Ye, Elizabeth Boschee, Leonardo Neves and Xiang Ren
[ACL 2020] Proceedings of the 58th Annual Meeting of the Association for Computational Linguistics, pp.8503-8511.

[5] AlpacaTag: An Active Learning-based Crowd Annotation Framework for Sequence Tagging

Bill Yuchen Lin*, **Dong-Ho Lee***, Frank F. Xu, Ouyu Lan and Xiang Ren

[ACL 2019] Proceedings of the 57th Annual Meeting of the Association for Computational Linguistics, pp.58-63.

Research papers in Journals

[6] Fake news detection using deep learning

Dong-Ho Lee, Yu-Ri Kim, Hyeong-Jun Kim, Seung-Myun Park, Yu-Jun Yang

Journal of Information Processing Systems, vol.15, no.5, pp.1119-1130, 2019.

Software Skills

Programming Language Python, Java, Android, HTML, CSS, Javascript (Vue.js), React, PHP, C, C++ **Web framework** Django

Deep Learning Framework PyTorch, Tensorflow **Web scraping** Scrapy (w/ Selenium) **Database** MySQL, Postgres, Redis, Memcached

Awards & Services

2016 **Scholarship**, Academic Scholarship *SKKU (Sungkyunkwan University)*

2018 **Best paper award**, The KIPS Spring Conference *The federation of Korean Information Industries*

External Reviewer KDD 2020, WWW 2020, ACL 2020, CONLL 2019, ACL NLI 2020, EMNLP DeepLo 2019

Extracurricular

Republic of Korea Air Force

Osan AB, Republic of Korea

Sergeant

Aug. 2013 - Aug. 2015

- Led a team at the Master Control and Reporting Center (MCRC) at Osan Air Base
- Team managed radars and consoles that monitored possible activities from North Korean aircraft and ballistic missiles.

Sangmoon High School

Seoul, Republic of Korea

Computer Science Teacher

June. 2017 - Nov. 2017

- Organized course curriculum and taught a computer science class for one semester.

Sunrin Internet High school

Seoul, Republic of Korea

Teaching Intern

May. 2017

- Taught JAVA to students who showed promising talent in IT.
- Received K-12 teaching license.