

# Dong-Ho Lee

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## Education

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### University of Southern California

M.S. in Computer Science

- Advisor: Dr. Xiang Ren

Los Angeles, United States

Aug. 2018 - PRESENT

### Sungkyunkwan University

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

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### Information Sciences Institute / Department of Computer Science, USC

Student Worker

Los Angeles, United States

Nov. 2018 -

- I have led four projects in INK (Intelligence and Knowledge Discovery Research) lab
- Worked on leveraging 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.
- **Project 1 : LEAN-LIFE** - Implemented a web-based label efficient annotation framework for sequence labeling and classification tasks, with an easy-to-use UI that not only allows an annotator to provide the needed labels for a task, but also enables learning from natural language explanations for each labeling decisions. This project is **submitted to ACL 2020**.
- **Project 2 : TriggerNER** - Introduced entity triggers, an effective proxy of human explanations for facilitating label-efficient learning of NER models, and proposed trigger matching network, which jointly learns trigger representations and soft matching module with self-attention such that can generalize to unseen sentences easily for tagging. This project is **submitted to ACL 2020 and AKBC 2020**.
- **Project 3 : AlpacaTag** - Implemented an open-source web-based data annotation framework for NER, which can dynamically suggest annotations with active learning, and enable real-time inter-annotator agreement. This project is **published in ACL 2019**.
- **Project 4 : BETTER** - currently involved in IARPA project which aims to better extraction from text towards enhanced retrieval.

## Publications

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UNDER REVIEW

### TriggerNER: Label-Efficient Learning for Named Entity Recognition via Annotating Entity Triggers

Dong-Ho Lee<sup>\*</sup>, Bill Yuchen Lin<sup>\*</sup>, Ming Shen, Xiao Huang, Ryan Moreno, Prashant Shiralkar and Xiang Ren

[ACL 2020, AKBC 2020] Under review in ACL 2020, AKBC 2020

### LEAN-LIFE: A Label-Efficient Annotation Framework Towards Learning from Annotator Explanation

Dong-Ho Lee<sup>\*</sup>, Rahul Khanna<sup>\*</sup>, Bill Yuchen Lin, Seyeon Lee, Qinyuan Ye, Elizabeth Boschee, Leonardo Neves and Xiang Ren

[ACL 2020] Under review in ACL 2020

CONFERENCE & JOURNAL

### AlpacaTag: An Active Learning-based Crowd Annotation Framework for Sequence Tagging

Bill Yuchen Lin<sup>\*</sup>, Dong-Ho Lee<sup>\*</sup>, 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

### 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.

### Comparison of performance between MariaDB and PostgreSQL in terms of CPU overhead

Dong-Ho Lee, Min-Chang Song, Young-Tae Cho, Seung-Won Kim

Proceedings of the 2018 Spring Conference of the Korea Information Processing Society, pp.297-299

### Improving accuracy of SNS-based Disaster Notification System using Morphological Analysis and Artificial Neural Network

Dong-Ho Lee, Suk-Min Kang, Soo-Hyun Kim, Sung-Jae Jo, Chan-Hyuk Park

Proceedings of the 2017 Fall Conference of the Korea Information Processing Society, pp.881-884

## Services

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EXTERNAL REVIEWER

**Main Conference** WWW 2020, CONLL 2019, ACL 2020 / **Workshop** EMNLP DeepLo 2019

## Teaching Experience

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### Sangmoon High School

After school teacher(Computer Science)

*Seoul, Republic of Korea*

*June. 2017 - Nov. 2017*

- Organized course curriculum and operated computer science class for high school students for a semester.

### Sunrin Internet High school

Teaching Internship

*Seoul, Republic of Korea*

*May. 2017*

- Instructor: Eun-ji Kim, Teacher in high school
- Teaching Internship for K-12 teaching license. Taught Java programming to high school students who attending IT-specialized school.

### SKKU (Sungkyunkwan University)

Teaching Assistant

*Seoul, Republic of Korea*

*Jan. 2016 - June. 2016*

- Course : Computational Thinking and Software Coding (GEDT014-12)
- Instructor : Oakyoung Han, Ph.D, Jungin Kwon, Ph.D

## Extracurricular

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### Republic of Korea Air Force

Sergeant (Compulsory Military Service)

*MCRC, OSAN AB, Republic of Korea*

*Aug. 2013 - Exp. Aug. 2015*

- Supported air traffic control for Korea's air defense.

## Honors & Awards

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2016	<b>Scholarship</b> , Academic Scholarship	<i>SKKU (Sungkyunkwan University)</i>
2018	<b>Best paper award</b> , The KIPS Spring Conference	<i>The federation of Korean Information Industries</i>
2017	<b>Encouragement Award</b> , The KSII Fall Conference	<i>Korean Society for Internet Information</i>
2016	<b>Excellence Award</b> , The KIPS Fall conference	<i>The federation of Korean Information Industries</i>