

# SEYEON (JULIA) LEE

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## RESEARCH INTERESTS

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Analysis on Pre-trained Language Model, Language Model Pre-training, Commonsense Reasoning, Natural Language Processing, Machine Learning

## EDUCATION

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**University of Southern California, Los Angeles, CA, U.S.A.** 08/2019-present

*Master of Science in Computer Science, Viterbi school of Engineering*

**Seoul Women's University, Seoul, Korea.** 03/2014-08/2018

*Bachelor of Engineering in Computer Science & Engineering*

**Illinois Institute of Technology, Chicago, IL, U.S.A.** 08/2016-05/2017

*Exchange Student, Information Technology and Business, School of Applied Technology*

## RESEARCH EXPERIENCE

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**INK Lab, University of Southern California, Los Angeles, U.S.A.** 12/2019-present

*Research Student Worker, Advised by Professor Xiang Ren*

- Working on constructing a challenging commonsense dataset that evaluates the capabilities of Pre-trained Language Models(PTLMs) in making commonsense inferences and the robustness of these inferences to language variations.
- Worked on constructing a novel numerical commonsense probing task with a diagnostic dataset consisting of 3K masked word prediction probes.
- Worked on expansive experiments to check whether our novel pre-training objectives improve a pre-trained text-to-text transformer to pack more commonsense knowledge into its parameters without relying on any external resources.

## PUBLICATIONS \*: equally contributed

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**Birds have four legs?! NumerSense: Probing Numerical Commonsense Knowledge of Pre-trained Language Models**

*in Empirical Methods in Natural Language Processing(EMNLP) 2020*

Bill Yuchen Lin, Seyeon Lee, Rahul Khanna and Xiang Ren

**Pre-training Text-to-Text Transformers for Concept-centric CommonSense**

*in Self-Supervised Learning(SSL) workshop at NeurIPS 2020*

Wangchunshu Zhou\*, Dong-Ho Lee\*, Ravi Kiran Selvam, Seyeon Lee, Bill Yuchen Lin and Xiang Ren

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

*in Annual Meeting of the Association for Computational Linguistics(ACL) 2020(system demo)*

Dong-Ho Lee\*, Rahul Khanna\*, Bill Yuchen Lin, Jamin Chen, Seyeon Lee, Qinyuan Ye, Elizabeth Boschee, Leonardo Neves and Xiang Ren

## UNDER REVIEW

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**RICA: Evaluating Robust Inference Capabilities Based on Commonsense Axioms**

*Submitted to the North American Chapter of the Association for Computational Linguistics(NAAACL) 2021*

Pei Zhou, Rahul Khanna, Seyeon Lee, Bill Yuchen Lin, Daniel Ho, Jay Pujara and Xiang Ren

**Pre-Training Text-to-Text Transformers for Concept-Centric CommonSense**

*Submitted to the International Conference on Learning Representations(ICLR) 2021*

Wangchunshu Zhou\*, Dong-Ho Lee\*, Ravi Kiran Selvam, Seyeon Lee, Bill Yuchen Lin and Xiang Ren

## **WORK EXPERIENCE**

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**INNERGBUS, Chicago, IL, U.S.A**

**05/2017-06/2017**

*Intern, Software Development Division*

- Worked with web development team
- Developed websites for a range of divisions across the company using PHP, Javascript, HTML, CSS, AWS
- Contributed to the development of networking software by providing technical support

## **COMPUTER SKILLS**

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Python, Swift, Java, C++, HTML, CSS, JavaScript, React, Django

## **HONORS & AWARDS**

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Full Tuition (Academic) Scholarship, Seoul Women's University	02/2018
Internship Scholarship, Seoul Women's University	09/2017
Exchange Student Scholarship, Seoul Women's University	08/2016
SWELL (English Course) Scholarship, Seoul Women's University	02/2016

## **ACTIVITIES**

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<i>Volunteer</i> , teaching math in a national shelter, Seoul, Korea	03/2018-06/2018
<i>Member</i> , Programming Study Club, Seoul, Korea	03/2018-06/2018
<i>Member</i> , English Club HaengDang-GMP, Seoul, Korea	07/2015-12/2017
<i>Volunteer</i> , TED-X, assisting stage management, Chicago, IL, U.S.A.	04/2017
<i>Member</i> , Cheering Squad S.W.U.R.S, Seoul, Korea	03/2014-10/2014