## SEYEON (JULIA) LEE

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## **RESEARCH INTERESTS**

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

#### **EDUCATION**

## 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

## 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

# 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, <u>Seyeon Lee</u>, Qinyuan Ye, Elizabeth Boschee, Leonardo Neves and Xiang Ren

#### **UNDER REVIEW**

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

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

## 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**

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

## **HONORS & AWARDS**

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