WHANHEE CHO
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RESEARCH INTERESTS

Database Management, Explainable AI, Natural Language Processing

PUBLICATIONS

Soohyeong Kim, Whanhee Cho, Minji Kim, and Yong Suk Choi. “Bidirectional Masked Self-attention and N-gram Span Attention for Constituency Parsing” EMNLP Findings 2023

Whanhee Cho, and Yong Suk Choi. “Semi-Supervised GAN using BERT hidden layer outputs and Multi-Generator”, *Korea Computer Congress*, 618-620, Jeju-do, Republic of Korea, June 2022, ISSN: 2635-5868

Whanhee Cho, and Yong Suk Choi. 2022. "LMGAN: Linguistically Informed Semi-Supervised GAN with Multiple Generators" Sensors 22, no. 22: 8761. https://doi.org/10.3390/s22228761

EDUCATION

UNIVESITY OF UTAH, Graduate School, Utah, the United States — Aug. 2023 - Present
Doctor of Philosophy in Computer Science

HANYANG UNIVERSITY, Graduate School, Seoul, South Korea — Mar. 2021 – Feb. 2023
Master of Science in Computer Science

HANYANG UNIVERSITY, Seoul, South Korea — Mar. 2017 – Feb. 2021
Bachelor of Computer Science and Software Engineering
Summa Cum Laude

RESEARCH EXPERIENCE

Hanyang University Artificial Intelligence LAB — Seoul, South Korea
Full-time Student Researcher — Mar. 2021 – Feb. 2023

- Data preprocessing, and data filtering for pre-training large-scale A.I. model of KT AI One Team*. The goal of the project is to protect the model from training with toxic data, including curses and hatred. We built a toxic dataset and a classifier for filtering such data since we approached the problem as a classification task. (KT AI One Team*: A national AI cooperative organization of 12 industry-university-research institutes.)
- Conceptualizing and participating in implementing data visualization of SNS-based Sentiment Analysis map*. (SNS-based Sentiment Analysis map*: Anxiety analysis map over South Korea based on tweets. http://sentimap.hanyang.ac.kr/)

Hanyang University Artificial Intelligence LAB — Seoul, South Korea
Full-Time Undergraduate Student Researcher — Dec. 2020 – Feb. 2021

- Investigated relations and impacts of next token probability onto positional embeddings.
- The purpose of this project was to validate the effect of GPT-2 next token prediction probability on positional embedding at the relation extraction task using the TACRED dataset. According to the next token probability, set the positional embedding values of the next gold token to be closer or further from the current token.
- The model architecture of relation extraction consists of BERT and bidirectional LSTM.

WORK EXPERIENCE

Samsung DS Seoul, South Korea
Lecturer April 2023 – June 2023

- Lectured about basic python programming, data preprocessing, and probability and statistics.

Fortify Communication Inc. Canada British Columbia, Canada
Internship Jul. 2019 – Aug. 2019 (seven weeks)

- Developed and investigated the backend code of a serviced website with Spring Framework

PROJECT EXPERIENCE

A Survey of Semi-Supervised Text Classification

- Course ITE4075: Computer Engineering Paper Research
- The goal of this project was to write a survey paper about semi-supervised learning for text classification papers.

Graduation Project: Real-Time Reply Twitter Bot for Identifying Fake News from Twitter

- Implemented a Twitter bot that can classify if a tweet contains fake news when a random user request to discriminate.
- The goal of the project is to discriminate whether a tweet contains fake news. The classifier is based on a neural network. The model classifies the tweet with lexical features, syntactic features, and psycholinguistic features as input variables.
- The contribution of the project is user-friendly access and real-time service discriminating against fake news. Since social media is one of the sources where fake news propagates, discrimination against the news also should be provided simultaneously to stop the propagation.

TEACHING

HANYANG UNIVERSITY Seoul, South Korea
Teaching Assistant for Undergraduate School Course Mar. 2022 – Jun. 2022

- Course ITE4053: Deep Learning Methods and Applications
- Taught undergraduate students various basic deep learning models such as Autoencoder, CNN, YOLO, RNN, GAN, and DQN. Used PyTorch and Google Colaboratory for implementations.
- Planned assignments and graded exams.

HANYANG UNIVERSITY Seoul, South Korea
Teaching Assistant for Undergraduate School Course Sep. 2021 – Dec. 2021

- Course CSE4007: Artificial Intelligence
- Planned assignments and graded exams.

HANYANG UNIVERSITY Seoul, South Korea
Teaching Assistant for Graduate School Course 2021 – 2022

- Course CCE0092: Introduction to Artificial Intelligence
- Planned assignments and graded papers and exams.

GRANTS, SCHOLARSHIPS & AWARDS

Brain Korea 21, National Research Foundation of Korea	2021-2022
Merit Scholarship based on Undergraduate GPA, Hanyang University	2021-2022
Summa Cum Laude, Hanyang University	Feb. 2021
Need Based Scholarship, Hanyang University	2019- 2020
National Grant Type II (reduction or exemption), Korea Student Aid Foundation (KOSAF)	2018- 2020
Honors student in the 1st semester of 2018, Hanyang University	Sep. 2018
Merit Based Scholarship, Hanyang University	2018
Career Based Scholarship, Hanyang University	2017-2018
National Grant Type I (reduction or exemption), Korea Student Aid Foundation (KOSAF)	Fall 2017

VOLUNTARY / EXTRACURRICULAR ACTIVITIES

Hanyang University Support Center for Disabled Students, Seoul, Republic of Korea Sep. 2020 - Dec. 2020

- Transcribed an academic lecture for a deaf student over 16 weeks
- Helped a student to get a comfortable environment while taking exams.

Child Welfare Center, Seoul, Republic of Korea Jan. 2019 - Feb. 2019

- Taught elementary students Mathematics and English.

Group Study Competition Mar. 2018 - Jun. 2018

- Group study Competition for Object-Oriented Programming Course
- Earned 3rd prize out of about 80 teams