

YUHEUN KIM

ykim72@syr.edu | <https://github.com/yuheunk> | Seoul, Republic of Korea

RESEARCH INTEREST

Natural Language Processing, Artificial Intelligence, Information Extraction, Information Retrieval.

EDUCATION

Ph.D. in Information Science and Technology, Syracuse University *Aug. 2022 – Present*

M.S. in Digital Analytics, Yonsei University *Mar. 2020 – Feb. 2022*

- Thesis: An Examination of Chronological Datasets Embedding Space for Video-Text Retrieval

B.A. in Economics, Underwood International College (UIC), Yonsei University *Mar. 2015 – Feb. 2020*

- 1 year exchange student at University of California, Irvine *Sep. 2017 – June. 2018*

PUBLICATIONS

1. Hong, G.*, **Kim, Y.***, Choi, Y.*, and Song, M. “BioPREP: Deep learning-based predicate classification with SemMedDB.” *Journal of biomedical informatics*, 2021, 122, 103888. [[link](#)] [[code](#)]

WORK IN PROGRESS

1. Paek I.*, Choi, N., Ha, S., **Kim, Y.**, and Song, M., “SQ2SV: Sequential Queries to Sequential Videos Retrieval” (Under Review)
2. Heo, G.*, Choi, Y., **Kim, Y.**, Hong, G., Song, M., and Yan, E., “A Comprehensive Analysis of Retracted Scientific Publications in the Social Science Domains.” (Under Review)

WORK EXPERIENCE

BIGCARE services **Seoul, Korea**
AI Research Intern *Mar. 2022 – Jun. 2022*

- Constructed food nutrition database and built a simple food search algorithm.
- Integrated Django API to food nutrition intake calculating source code.

PROJECT EXPERIENCE

Research Assistant – *Worked under Prof. Min Song (Yonsei University)*

“Biomedical Text Predicate Classification” *Jul. 2020 – Sep. 2021*

- Constructed a biomedical dataset, BioPREP, from SemMedDB which contains biomedical text, filtered entities, and their predicate information.
- Experimented on multiple neural network-based algorithm including CNN, RNN, BERT models and compared, contrasted each model performance in predicting relation from a biomedical text.
- Configured code implementation for fine-tuning pretrained model and uploaded to Github.

“Emerging Issue Detection”

April. 2021 – Sep. 2021

- Collaboration project with the National Assembly Futures Institute (NAFI).
- Predicted emerging issues for each field of study using term burstiness.
- Analyzed the emerging issue for each field of study and how it was used.

“Keyword Analysis on by-election candidates”

Apr. 2021

- Collaboration project with a broadcasting network, Channel A.
- Utilized social media data (Naver News, Café comments, Blog posts, YouTube comments, Twitter posts).
- Analyzed social media data for each by-election candidate, using relevant keywords and co-occurrences.
- Conducted a sentiment analysis on each candidate keywords and how the social media data portray their stance on important issues.

“Building AI training dataset for text summarization”

Sep. 2020 – Dec. 2020

- Constructed AI summarization training dataset in a project hosted by the National Information Society Agency (NIA).

Research Assistant – Collaborated with Prof. Erjia Yan (Drexel University)

“Analysis of social science domain retracted papers”

May. 2021 – Oct. 2021

- Constructed a codebook from retracted papers in social science domain collected from Web of Science.
- Statistically analyzed the pattern for retracted reason.

Project Researcher – Worked under Prof. Won Suk Lee (Yonsei University)

“Evaluating user log data for online classes: Preswot”

Feb. 2020 – March. 2020

- Analyzed student user log data from Preswot, an online class platform.
- Defined three indicators of assessing student performance from the user log data: concentration, participation and comprehension.
- Analyzed the correlation between three indicators and students’ academic achievement through a time series analysis.

AWARDS

2020 Digital Analytics Major Competition

Oct. 2020

1st Place in Preprocessing competition, Yonsei University

- Preprocessed datasets using missing value imputation
- Granted scholarship of \$1.5K.

2020 Digital Analytics Working Group

Sep. 2020 - Dec. 2020

Awarded scholarship for individual project, Yonsei University

- Trained a set of character images on DCGAN to generate a new character.
- Granted scholarship of \$0.5K.

2020 AI Solution Competition

Oct. 2020 - Nov. 2020

3rd Place in Time Series Prediction model,

Seochogu Office & National IT Industry Promotion Agency (NIPA).

- Predicted Seochogu preschool indoor air quality level.

TEACHING EXPERIENCE

Teaching Assistant, Yonsei University

“TA for Hanhwa Total AI Training”

Spring 2021

- Instructed a class of 20 Hanhwa Total employees on a text classification task using python.

“TA for Big Data Youth Campus from Korea Data Agency”

Fall 2020

- Handled questions from students related to their final data analysis project.

“Student Mentor for Digital Analytics”

Summer 2021

- Instructed 2 students weekly on NLP tasks and algorithmic problems during summer vacation.
- Provided baseline codes for web crawling and text mining tasks such as sentiment analysis.
- Provided instructions and examples for solving coding test problems.

SKILL AND LANGUAGE

Programming: Python, Bash, R, SQL.

Data Science: Pandas, Numpy, Matplotlib.

Deep Learning: Pytorch, Tensorflow+Keras.

Languages: Korean (Native), English (Fluent), Chinese (Beginner), Japanese (Beginner).

[Updated: Sep 2022]