MICHELLE KIM

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EDUCATION

Michigan State University, East Lansing, MI, USA — Sep. 2020 -
Ph.D in Computer Science and Engineering

Seoul National University, Seoul, Republic of Korea — Sep. 2017 - Jan. 2019
Completed 20 credits towards M.S./Ph.D in Computer Science and Engineering

Yonsei University, Seoul, Republic of Korea — Mar. 2015 - Aug. 2017
B.S. in Computer Science

University of Pennsylvania, Philadelphia, PA, USA — Sep. 2009 - May 2013
Completed 74 credits towards B.A in Mathematics

PUBLICATIONS

1. Michelle YoungJin Kim, Junghwan Kim, Kristen Johnson, "Race, Gender, and Age Biases in Biomedical Masked Language Models," The 61st Annual Meeting of the Association for Computational Linguistics (ACL'23)
2. Junghwan Kim, Michelle YoungJin Kim, Barzan Mozafari, "Provable Memorization Capacity of Transformers," The Eleventh International Conference on Learning Representations (2023)
3. Michelle YoungJin Kim, Junghwan Kim, Bryan Woosung Kim, Kristen Johnson, Jee-In Kim, "AsdClaims: Twitter Dataset of Claims on Autism Spectrum Disorder," 1st International Workshop on Big Data Analytics for Health and Medicine (2022)
4. Michelle YoungJin Kim, Kristen Johnson, "CLoSE: Contrastive Learning of Subframe Embeddings for Political Bias Classification of News Media," The 29th International Conference on Computational Linguistics (COLING-2022)
5. Woojeong Jin, Dongjin Choi, Youngjin Kim, and U Kang, "Activity Prediction from Sensor Data using Convolutional Neural Networks and an Efficient Compression Method," Journal of KIISE (2018)

EXPERIENCES

MedKit Korea — May - Aug. 2021, May - Aug. 2022
Intern — *Seoul, Republic of Korea*

· Led the collection of social media data on Autism Spectrum Disorder (ASD) via keyword search, curated dataset through filtering and labeling, and published results at IEEE BDA4HM Workshop.
· Collaborated with game developers to create scenarios for digital therapy game using language generation models.

· Collaborated with the Jeju National University Hospital in Korea to build a fact-checking model on ASD using machine learning algorithms.

PROJECTS

Legal Judgement Prediction Aug. 2020 - Dec. 2020
Michigan State University Course Project *East Lansing, MI, USA*

· Proposed a novel perspective of utilizing summarization as a pre-processing step for legal judgment prediction.
· Studied the taxonomy of legal cases and collected data for legal text summarization and judgment prediction.

Building Lidar-Based Human Detection Technology May 2018 - Sep. 2018
Samsung Electronics Co., Ltd. *Seoul, Republic of Korea*

· Developed a Lidar-sensor environment for data acquisition.
· Acquired and extracted data for the experiment, using a Lidar sensor.

Building Energy Optimization Technology Sep. 2017 - Apr. 2018
Samsung Electronics Co., Ltd. *Seoul, Republic of Korea*

· Developed a model for activity prediction by improving Deep Residual Net.
· Acquired and processed data for the experiment, using temperature, sound and video data.
· Managed the project website that displayed activity prediction in real time.

Parallelization of Laminar-IR Sep. 2016 - May 2017
Capstone project at Yonsei University *Seoul, Republic of Korea*

· Implemented unfolding of stream graphs onto multicore platforms, using double buffering technique and barriers for synchronization.

Recommendation System for the Best-Fit Keyboard Layout Sep. 2016 - Dec. 2016
Class project at Yonsei University *Seoul, Republic of Korea*

· Implemented a deep learning model that recommends a mobile keyboard layout.
· Acquired log file data of mobile users.

AWARDS AND HONORS

Michigan State University Enrichment Fellowship 2020
Samsung Lee Kun-Hee Scholarship, Daewon Foreign Language High School 2008

EXTRACURRICULAR ACTIVITIES

Engineering Graduate Leadership Fellows 2023
CRA-WP Grad Cohort for Women 2022

TEACHING EXPERIENCE

Teaching Assistant, Introduction to Machine Learning Fall 2023
Michigan State University *East Lansing, MI, USA*

· Taught students during office hours, and made assignments and tests.

Teaching Assistant, Introduction to Data Mining Spring 2018
Seoul National University *Seoul, Republic of Korea*

· Taught students during office hours, and made assignments and tests.

Teaching Assistant, After-school computer science program Summer 2014
Geumok Elementary School *Seoul, Republic of Korea*

· Taught basic programming skills with Scratch, a programming software.

Teaching Assistant, SAT academy 2009-2011
IvyPlan *Seoul, Republic of Korea*

· Taught SAT Reading, and managed TAs.

English Tutor, Voluntary program 2006-2007
Domestic violence shelter *Seoul, Republic of Korea*

· Mentored students, and taught TOEIC and Korean-high-school-level English.

RELEVANT COURSEWORK

Numerical Linear Algebra	Spring 2021
Natural Language Processing	Fall 2020
Topics in Algorithms (Data Compression)	Spring 2018
Introduction to Computer Vision	Spring 2018
Deep Learning	Fall 2017
Machine Learning	Fall 2017
Discrete Mathematics	Fall 2015

TECHNICAL STRENGTHS

Programming Languages	Python, C++, C, Java
Libraries	PyTorch, TensorFlow, NumPy, SciPy, Pandas

LANGUAGE SKILLS

Advanced	Korean, English
Beginner	Spanish