DAVID Y.J. KIM

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www.linkedin.com/in/daki7711 | Webpage : https://daki7711.github.io | US/Korean Dual Citizen

EDUCATION

- MS, Computer Science, University of Colorado Boulder, 2021
  - Advised by Michael C. Mozer (4.0/4.0)
  - Thesis : Modeling Student Comprehension Using Textbook Annotations: An Exploration of a Large Scale, Naturalistic Corpus
- BS, Computer Science and Engineering, Sogang University, 2016
  - Graduated with Magna Cum Laude (3.67/4.3)
  - Summer Session, University of California, Berkeley, 2014

RESEARCH EXPERIENCE

Institute of Cognitive Science   **University of Colorado Boulder**
Research Assistance   *2019 to present*

- In collaboration with Dr. Michael Mozer, Adam Winchell
- Developed intelligent textbooks with the aid of OpenStax, a nonprofit organization that supports open-access college-level digital textbooks. Based on the annotations the students make obtained a window into the student's mental state during initial engagement with the material. Mostly focused on identifying the pattern of highlights an individual makes.
- Utilized python, STAN, sklearn, nltk, and more
- Project led to the submission of 2 publication to AIED Workshop Conference

PUBLICATIONS

- **Kim, David Young-Jae**, Scott, T. R., Mallick, D., & Mozer, M. C. (2021). "Using semantics of textbook highlights to predict student comprehension and knowledge retention." iText-books@AIED (2021).
- **Kim, David Young-Jae**, A. Winchell, A. Waters, Phillip J. Grimaldi, Richard Baraniuk and M. Mozer. "Inferring Student Comprehension from Highlighting Patterns in Digital Textbooks: An Exploration in an Authentic Learning Platform." iText-books@AIED (2020).
  - Publication Recognition Award from CU Boulder Computer Science Department

TEACHING AND MENTORING EXPERIENCE

- Graduate Student Assistant(Algorithm) - 2019
- Undergraduate Mentoring Assistant(Data Structure) - 2014 ∼ 2015
- Undergraduate Mentoring Assistant(Introduction to Engineering Design) - 2014
- International Student Mentoring - 2014∼2016

AWARDS

- Academic Scholarships
  - Research Assistance-ship, 2020 ∼ 2021
  - Grad School UF Scholarships, 2020
  - Albatross Scholarship, 2018
  - Academic Excellence Scholarship, 2014 ∼ 2016
- Fellowships
  - Outstanding Student Fellowship by NAVER Cor. 2015
  - Summer Overseas Studying Fellowship by Binggrae Cor. 2014

TALKS

- Presentation, Third Workshop on Intelligent Textbooks at The 22th International Conference on Artificial Intelligence in Education (AIED 2021)
- Presentation, Second Workshop on Intelligent Textbooks at The 21th International Conference on Artificial Intelligence in Education (AIED 2020)
  - Theme: Smart Digital Textbooks To Enhance Learning
- Poster Session for The Canada-Korea Conference on Science and Technology(CKC 2019) - Prairies @ Banff, Alberta, Canada
  - Theme: Clean Technologies and Sustainable Future

WORK EXPERIENCE

KATUSA   **ROK-US Combined Forces Command**
Military Service   *2016 to 2018*
- Served in the Military as KATUSA (Korean Augmented to the US Army)
- Worked in Intelligence Security and Operations staff

PROJECT

- Analysis of Neural Hawkes Process in Event Based Sequences - 2020
    - Project for CSCI 5922(Neural Networks and Deep Learning)
    - Compared Neural Hawkes Process with Hawkes process
    - Collaborated with Abhilash Jahagirdar, Karthik Siddaramanna, Madhusudhan Aithal
    - Utilized pytorch, theano
- Investigation in Data Imbalance - 2019
    - Project for CSCI 5622 (Machine Learning)
    - Investigated the suggestion that the PR curve is superior than the ROC curve in imbalance data settings
    - Collaborated with Seoung-Joon Kim, Hao Wu, Aman Satya
    - Utilized keras, tensorflow
- Face Tracking and Recognition at a Distance - 2015 $\sim$ 2016
    - Undergraduate assistant in Computer Vision & Image Processing Laboratory(Sogang University)
    - Calibrate PTZ Camera using C++ programming
- NIPA Global ICT Capstone Project jointed with SUNY-Stony Brook - 2015
    - Nationwide project program from National IT Industry Promotion Agency(NIPA)
    - Experience hands-on optimizing/minimizing the design and construction of a self-navigating ground vehicle
    - Used Computer-aided design(CAD) for robot design
- Compare Performance of multi-thread and FPGA - 2015
    - Undergraduate project in Embedded Computing Laboratory(Sogang University)
    - Compared the performance of Frequent Item Set Algorithms using C++ Multi-thread using openmp and FPGA

SKILLS

Related Courses Neural Networks and Deep Learning, Machine Learning, Convex Optimization, Mathematical Statistics, Probabilistic Models of Human and Machine Learning
Programming Python, C, C++, Java, Python, Matlab, HTML, CSS, PHP
Packages pystan, pytorch, tensorflow, matplotlib, sklearn
Languages English, Korean

EXTRA AFFILIATIONS

- Alpha Sigma Nu
    - Global honor program of Worldwide Christian University Society
- ACES
    - Violinist of the orchestra club at Sogang University

REFERENCE

- Michael C. Mozer
    - Senior Staff Research Scientist, Google Brain, Mountain View, CA
    - Professor Department of Computer Science and Institute of Cognitive Science University of Colorado, Boulder
    - e-mail : mozer@colorado.edu