

Seongmin Lee

PH.D. STUDENT IN COMPUTER SCIENCE AT GEORGIA INSTITUTE OF TECHNOLOGY

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Summary

I'm a Ph.D. student in Computer Science at Georgia Tech, advised by Professor Polo Chau. My research aims to provide explanations and interpretations for various machine learning techniques. I received my B.S. in Electrical and Computer Engineering from Seoul National University in February 2021.

Education

Georgia Institute of Technology

PH.D. IN COMPUTER SCIENCE

Advisor: Prof. Duen Horng (Polo) Chau

Georgia, USA

Aug. 2021 - Present

Seoul National University

B.S. IN ELECTRICAL AND COMPUTER ENGINEERING

Graduated with Summa Cum Laude. Overall GPA: 3.91/4.0, Major GPA: 3.94/4.0

Seoul, South Korea

Mar. 2016 - Feb. 2021

Korea Science Academy of KAIST

MATH AND SCIENCE SPECIALIZED HIGH SCHOOL

One year early entrance, Graduated with distinction in GPA

Busan, South Korea

Feb. 2013 - Feb. 2016

Research Experience

Cisco Systems, Inc.

PHD INTERN

- Mentor: Ali Payani

California, USA (Remote)

May. 2021 - Present

Polo Club of Data Science, Georgia Institute of Technology

GRADUATE RESEARCH ASSISTANT

- Advisor: Prof. Duen Horng (Polo) Chau
- Member of the Polo Club of Data Science where we innovate scalable, interactive, and interpretable tools that amplify human's ability to understand and interact with billion-scale data and machine learning models.
- Working on projects about providing explanations on misinformation websites, DNN bias detection and mitigation, and DNN concept evolution.

Georgia, USA

Aug. 2021 - Present

Data Mining Lab, Seoul National University

UNDERGRADUATE RESEARCH INTERNSHIP

- Advisor: Prof. U Kang
- Studied multi-source domain adaptation under various constraints and settings
- Investigated the problem of BERT that the tasks with few training data are hard to fine-tune and solved it using reinforcement learning

Seoul, South Korea

Jan. 2020 - Feb. 2021

Communication and Machine Learning Laboratory, Seoul National University

UNDERGRADUATE RESEARCH INTERNSHIP AND BACHELOR'S THESIS

- Advisor: Prof. Jungwoo Lee
- Studied the problem of class imbalance and uncertainty in semantic segmentation

Seoul, South Korea

Sep. 2019 - Apr. 2020

Biomedical Precision Laboratory, The University of Tokyo

UNDERGRADUATE RESEARCH INTERNSHIP

- Advisor: Dr. Keiichi Nakagawa, Dr. Ayumu Ishijima.
- Observed interaction between human cells and acoustic waves by constructing a microscopic motion-picture camera with sub-nano resolution using optical equipment and laser

Tokyo, Japan

Jul. 2018 - Aug. 2018

Publications

MisVis: Explaining Web Misinformation Connections via Visual Summary

Seongmin Lee, Sadia Afroz, Haekyu Park, Zijie J. Wang, Omar Shaikh, Vibhor Sehgal, Ankit Peshin, and Duen Horng Chau

CHI Conference on Human Factors in Computing Systems Extended Abstracts, 2022

Multi-EPL: Accurate Multi-Source Domain Adaptation

Seongmin Lee, Hyunsik Jeon, and U Kang

PLOS ONE, 2021

AUBER: Automated BERT Regularization

Hyun Dong Lee*, Seongmin Lee*, and U Kang (* These authors contributed equally to this work)

PLOS ONE, 2021

Unsupervised Multi-Source Domain Adaptation with No Observable Source Data

Hyunsik Jeon, Seongmin Lee, and U Kang

PLOS ONE, 2021

Patent

Pruning Method for Attention Head in Transformer Neural Networks for Regularization and Apparatus Thereof

Seongmin Lee, Hyun Dong Lee, and U Kang

10-2020-0162397, 2020

Honors & Awards

The Presidential Science Scholarship

Mar. 2016 - Dec. 2019

KOREA SCIENCE AID FOUNDATION

SNU Engineering Honor Society (STEM)

Mar. 2018 - Dec. 2019

COLLEGE OF ENGINEERING, SNU

Voluntary Service Award

Dec. 2018, Dec. 2017

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING, SNU

Teaching

Deep Learning Course for LG Chem, Lab session lecturer

Jan. 2021

Deep Learning Course for SK Hynix, Lab session lecturer

Nov. 2020

Introduction to Algorithm, SNU, Undergraduate student tutor

Fall 2020, Fall 2019

Introduction to Physics I, SNU, Undergraduate student tutor

Spring 2017

Skills

Programming C/C++, Python, Java, Verilog, HTML/CSS

Frameworks Tensorflow, PyTorch

Languages Korean (Native), English (iBT: 109 (R28/L28/S26/W27), GRE: Verbal 163, Writing 4.5)

Extracurricular Activity

GTKSA (Georgia Tech Korean Student Association)

Aug. 2021 - Present

Serving as a secretary and web administrator.

SNU Buddy

Sep. 2020 - Dec. 2020

Buddy program for the international exchange students. Used to be a group leader.

SNU Engineering Honor Society (STEM)

Mar. 2018 - Dec. 2019

Organized academic seminars, international round table, and mentoring programs as a vice president.

Vision Mentoring, Seoul National University

Jul. 2019

Lectured high school students on engineering (More than 700 students attended)

Dream Camp Mentoring, Seoul National University

Feb. 2019, Feb. 2018

Educated high school students in the countryside by designing a mentoring program

Student Vice President

Nov. 2017 - Oct. 2018

Elected as a vice president of the Department of Electrical and Computer Engineering, SNU

Student Reporter

Sep. 2017 - Feb. 2021

Published brochures about the Department of Electrical and Computer Engineering every semester

Talent Sharing Volunteer Camp, KOSAF

Jan. 2017, Aug. 2016

Conducted self-planned mentoring for elementary school students in underprivileged areas in Korea