

Yehyun Suh

+1-(770)-298-7887 • Nashville, TN

yehyun.suh@vanderbilt.edu • [linkedin.com/in/yehyun-suh](https://www.linkedin.com/in/yehyun-suh) • yehyunsuh.github.io

EDUCATION

Vanderbilt University Doctor of Philosophy in Computer Science	Expected May 2028 Nashville, TN
Dongguk University Bachelor of Science in Information & Communication Engineering	Feb 2022 Seoul, South Korea

RESEARCH EXPERIENCE

Visual INformatics and Engineering (VINE) Laboratory , Vanderbilt University <i>Graduate Student Researcher</i> (Advisor: Daniel Moyer Ph.D.)	Sep 2022 – Present Nashville, TN
innovative Radiology AI Laboratory (iRAIL) , Seoul National University Hospital <i>Research Intern</i> (Principal Investigator: Jisun Hwang M.D.)	May 2022 – Aug 2022 Seoul, South Korea
Intelligent Software Architecture (ISA) Laboratory , Dongguk University <i>Undergraduate Student Researcher</i> (Advisor: Woongsup Kim Ph.D.)	Mar 2020 – Feb 2022 Seoul, South Korea

PUBLICATIONS

* denotes equal contribution

Under Review

- [U1] **Novel dilation-erosion labeling technique allows for rapid, accurate and adjustable alignment measurements in primary Total Knee**
Aleksander Mika*, **Yehyun Suh***, Robert Elrod, Daniel Moyer, Martin Faschingbauer, J. Ryan Martin

Short Paper

- [S1] **Dilation-Erosion Methods for Radiograph Annotation in Total Knee Replacement**
Yehyun Suh, Aleksander Mika, J. Ryan Martin, and Daniel Moyer
Medical Imaging with Deep Learning (MIDL), short paper track, 2023, Nashville, Tennessee

Workshop Paper

- [W1] **Label Augmentation Method for Medical Landmark Detection in Hip Radiograph Images**
Yehyun Suh, Peter Chan, J. Ryan Martin, and Daniel Moyer
NeurIPS workshop on Medical Imaging (MedNeurIPS), 2023, New Orleans, Louisiana

Abstract/Poster

- [A1] Best Poster Award
Label Augmentation Method for Medical Landmark Detection in Hip Radiograph Images
Yehyun Suh, Peter Chan, Aleksander Mika, J. Ryan Martin, and Daniel Moyer
12th Annual Surgery, Intervention, and Engineering Symposium, Nashville, Tennessee

Korean Book [Participated as an undergraduate research assistant]

- [KB3] 김웅섭, Software engineering - Python, Flask, Heroku, 2021, doi.org/10.979.1191057/478
[KB2] 김웅섭, 소고기보다 알고리즘, 2021, doi.org/10.979.1191057/850
[KB1] 김웅섭, Mobile software - HTML, JavaScript, React, 2020

INVITED TALKS & TUTORIALS

Artificial Intelligence in Medical Scenes

Tennessee State University

Oct 2023

Nashville, TN

Implementing Data Science Projects in Python

Vanderbilt University

Aug 2023

Nashville, TN

TEACHING EXPERIENCE

Open-Source Programming for Medical Image Analysis, Vanderbilt University

Graduate Teaching Assistant

2023 Fall

Nashville, TN

Programming and Problem Solving, Vanderbilt University

Graduate Teaching Assistant

2023 Spring

Nashville, TN

Artificial Intelligence in the Future Society, Dongguk University

Undergraduate Teaching Assistant

2021 Fall

Seoul, South Korea

Computational Thinking, Dongguk University

Undergraduate Teaching Assistant

2021 Spring

Seoul, South Korea

HONORS AND AWARDS

Graduate

- **Best Poster Award**, 12th Annual Surgery, Intervention, and Engineering Symposium, 2023 Fall

Undergraduate

- Summa Cum Laude, Dongguk University
- Dean's List, Dongguk University, 2016 Spring/2016 Fall/2020 Spring/2020 Fall/2021 Spring
- Software Academic Excellence Scholarship, Dongguk University, 2020 Fall/2021 Spring
- Academic Excellence Scholarship, Dongguk University, 2016 Spring/2016 Fall/2021 Spring
- 3rd Place in XR Challenge Competition, Ministry of Science and ICT, Korea, 2021
- 3rd Place in Summer Dongguk Capstone Value Up Program, Dongguk University, 2021
- 2nd Place in Graduation Project Competition, Dongguk University, 2021
- 4th Place in Winter Dongguk Capstone Value Up Program, Dongguk University, 2021
- Course Excellence Scholarship, Enterprise & Society Tailored Capstone Design, Dongguk University, 2021
- Course Excellence Scholarship, Operating System, Dongguk University, 2020
- Oversea Academic Tour Scholarship, Dongguk University, 2017

WORKING EXPERIENCE

Subdream Studios

Software Developer and Game Analyzing Intern

June 2021 – Aug 2021

Remote

Innovation Center for Engineering Education

Working Scholar

Jan 2021 – June 2021, Aug 2021 – Dec 2021

Seoul, South Korea

College of Engineering Office

Working Scholar

Mar 2020 – Jan 2021

Seoul, South Korea

PROJECTS

Deep learning-based determination of Risser stage trend using abdominal radiographs in Korean

children, Seoul National University Hospital

May 2022 – Aug 2022

- Developed an image classification model that can predict Risser stage from the patient's iliac crest radiographs
- Implemented semantic segmentation to segment pelvic bone from iliac crest radiographs
- On external validation set, the model achieved top1 and top2 ACC of 70.2% [CI: 63.9-76.4] and 93.8% [CI: 90.4-96.6], AUROC of 0.937 [CI: 0.900-0.966] and MAE of 0.341 [CI: 0.269-0.423]

Reverse Pill Image Search, Boostcamp AI Tech

Apr 2022 – June 2022

- People who were excluded from medical benefits did not receive an appropriate prescription in time
- Developed a model that can search the most similar pill from the pill image given from the user by extracting features such as shape, type, and color of pills through image classification
- Final performance of the model - top1 accuracy: 43%, top5 accuracy: 80%
(<https://github.com/boostcampaitech3/final-project-level3-cv-16>)

EXTRACURRICULAR ACTIVITIES

Korean Graduate Students and Scholars Association, Vanderbilt University*Secretary*

Aug 2022 – Aug 2023

Nashville, TN

Boostcamp AI Tech, Naver Connect Foundation*Computer Vision Track*

Jan 2022 – June 2022

Seoul, South Korea

Innovation Center for Engineering Education, Dongguk University*President of the Student Committee 'DAVINCI'*

2021

Seoul, South Korea

Information & Communication Engineering, Dongguk University*Vice President of the Student Committee*

2020

Seoul, South Korea

Dongguk University Tennis Club*Regular Member*

Sep 2016 – Feb 2022

Seoul, South Korea

REFERENCES

Daniel Moyer, Ph.D., Assistant Professor

Department of Computer Science

School of Engineering

Vanderbilt University

daniel.moyer@vanderbilt.edu**J. Ryan Martin, M.D.**, Assistant Professor

Adult Reconstruction Division

Vanderbilt University Medical Center

john.martin@vumc.org**Woongsup Kim, Ph.D.**, Associate Professor

Department of Information & Communication Engineering

College of Engineering

Dongguk University

woongsup@dongguk.edu**Sungyoun Choi, Ph.D.**, Research Professor

Innovation Center for Engineering Education

College of Engineering

Dongguk University

choisung@dongguk.edu