

Sihwa Park

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Seoul, South Korea

RESEARCH INTEREST

Medical Image Processing, 2D-to-3D Reconstruction, Generative Models (e.g., Diffusion), Representation Learning

EDUCATION

Korea University Seoul, South Korea

Master of Computer Science (Advised by Prof. [SeungJun Baek](#)) 2021 Sep - 2023 Aug

- Master's Thesis: 3D Teeth Reconstruction from Panoramic Radiographs using Neural Implicit Functions

Korea University Seoul, South Korea

Bachelor of Computer Science (Double major in Mathematics) 2015 March - 2021 Aug

- Exchange program at the University of Toronto for 2019 Fall - 2020 Spring semesters

PUBLICATIONS

- 3D Teeth Reconstruction from Panoramic Radiographs using Neural Implicit Functions

Sihwa Park, SeongJun Kim, In-Seok Song, and Seungjun Baek in *International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI) 2023 (Top 14% Paper)*

Papers Under Review:

- Estimating 3D Dental Structures using Simulated Panoramic Radiographs and Neural Ray Tracing (<https://arxiv.org/abs/2304.04027>)

Sihwa Park, SeongJun Kim, Doeyoung Kwon, Yohan Jang, In-Seok Song, and Seungjun Baek

RESEARCH EXPERIENCE

Data Mining & Information Systems Lab Seoul, South Korea

(Lab of Prof. Jaewoo Kang)

Student Researcher 2018 March – 2019 March

- Contributed to a project involving Alzheimer patients dataset, focusing on data preprocessing and running baseline models.

WORK EXPERIENCE

Pluscope (IT Startup)

Seoul, South Korea

Full-stack Programmer

2021 Jan – Present

- Developed an open-content platform (adducate.net) for primary education for students and vulnerable populations in developing countries

Withcat Software (IT Startup)

Seoul, South Korea

Deep Learning Engineer

2020 Apr – 2021 Aug

- Developed APIs for face detection and recognition for Korea Defence Intelligence Command (KDIC) using Pytorch and Flask

TEACHING

Digital Finance Engineering Major Freshmen Summer Program

Korea University

Lecturer

2022/2023 Aug

- Taught essential calculus, linear algebra, and statistics for Digital Finance Engineering major freshmen students in a 4-week program

Probability & Statistics

Korea University

Teaching Assistant

2022/2023 Aug

Convex Optimization

Korea University

Teaching Assistant

2022/2023 Mar

PATENT

- Device and Method for 3D Teeth Reconstruction from Panoramic Radiographs using Neural Implicit Functions - S.J. Baek, **S.H. Park**, I.S. Song, S.J. Kim (Application Number: 10-2023-0048579)

SKILLS

- Server Management: Proficient in Docker and Kubernetes, responsible for lab server administration.
- Web & Machine Learning Programming: Python, PHP, JAVA, Matlab, Pytorch
- Languages: Fluent in both Korean and English.

HONORS AND AWARDS

- DAELIM SU-AM Scholarship: Full undergraduate scholarship recipient
- Undergraduate Graduation Project Competition: Awarded the Bronze Medal
- Research Scholarship: Recipient for the year 2021/2022