

Sihwa Park

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<https://sihwa-park.github.io/>

INTRODUCTION

I am a second-year Ph.D. student, advised by Professors [Alexander Terenin](#) and [David Bindel](#).

Research Interests: Theoretical machine learning, Bayesian optimization, decision-making under uncertainty, bridging theory and practice in optimization and scientific computing

EDUCATION

Cornell University	Ithaca, NY, USA
<i>Ph.D. Computer Science</i> (Advisors: Professors Alexander Terenin and David Bindel)	2024 Fall - Present
Korea University	Seoul, South Korea
<i>M.S. Computer Science</i> (Advisor: Professor. Seungjun Baek)	2021 Fall - 2023 Fall
Korea University	Seoul, South Korea
<i>B.S. Computer Science and Mathematics</i>	2015 Spring - 2021 Fall

CURRENT RESEARCH

- Cost-aware Multi-objective Bayesian Optimization via Gittins Indices, manuscript in preparation.
Contribution: Generalizes [Pandora's Box Gittins Index framework](#) to **multi-objective** and **cost-aware** settings, studies the optimality of index-based policies in multi-objective decision problems, and demonstrates the strong performance of newly proposed Gittins index-based multi-objective methods.

PUBLICATIONS

- NeBLa: Neural Beer-Lambert for 3D Reconstruction of Oral Structures from Panoramic Radiographs
Sihwa Park, SeongJun Kim, Doeyoung Kwon, Yohan Jang, In-Seok Song, and Seungjun Baek in *AAAI*, 2024
- 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 2023 (Top 14% Paper)*

TEACHING EXPERIENCE

CS 3700 (Foundations of AI Reasoning and Decision-Making)	Cornell University
Teaching Assistant	2025 Spring/Fall
CS 2110 (Object-Oriented Programming and Data Structures)	Cornell University
Teaching Assistant	2024 Fall

Digital Finance Engineering Major Freshmen Summer Program	Korea University
Lecturer	2022/2023 Aug
Probability & Statistics	Korea University
Teaching Assistant	2022/2023 Fall
Convex Optimization	Korea University
Teaching Assistant	2022/2023 Spring

WORK EXPERIENCE

Withcat Software (IT Startup)	Seoul, South Korea
<i>Full-stack Software Engineer specialized in Deep Learning</i>	2020 Apr – 2021 Aug

PATENT

- Device and Method for 3D Teeth Reconstruction from Panoramic Radiographs using Neural Implicit Functions - Seungjun Baek, **Sihwa Park**, In-Seok Song, Seongjun Kim (Korea Application Number: 10-2023-0048579)

SKILLS

- Programming: Python, PyTorch, PHP, Java, Docker, Kubernetes