

Research Interests

Bayesian optimization from a decision-making perspective, theoretical machine learning, and scientific computing.

Education

Cornell University

Ph.D. in Computer Science

Ithaca, NY, USA

Fall 2024–Present

- Advisors: Professors [David Bindel](#) and [Alexander Terenin](#)

Korea University

M.S. in Computer Science

Seoul, South Korea

Fall 2021–Fall 2023

- Advisor: Professor Seungjun Baek

Korea University

B.S. in Computer Science and Mathematics

Seoul, South Korea

Spring 2015–Spring 2021

Project

Bayesian Optimization for Alpha-particle Confinement in Stellarators
with [David Bindel](#)

- Applies constrained Bayesian optimization to design stellarator shapes that minimize alpha-particle energy loss, evaluated with GPU-accelerated particle-tracing simulations.

Cost-aware Multi-objective Bayesian Optimization via Gittins Indices
with [Alexander Terenin](#)

- Generalizes the [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 proposed Gittins index-based multi-objective methods.

Publications

- [1] **S. Park**^{*}, J. Zhu^{*}, V. Jain, S.-Y. Chou, and A. Terenin, “Thompson sampling using Prior-fitted Diffusion Transformers”, in *Advances in Neural Information Processing Systems (NeurIPS 2026)*.
- [2] **S. Park**, S. Kim, D. Kwon, Y. Jang, I.-S. Song, and S. Baek, “NeBLa: Neural Beer-Lambert for 3D reconstruction of oral structures from panoramic radiographs”, in *Proceedings of the AAAI Conference on Artificial Intelligence (AAAI)*, 2024.
- [3] **S. Park**, S. Kim, I.-S. Song, and S. Baek, “3D teeth reconstruction from panoramic radiographs using neural implicit functions”, in *International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI)*, 2023, (Top 14% Paper).

Teaching Experience

CS 6786 (Probabilistic Machine Learning for Scientific Discovery)

Teaching Assistant

Cornell University

Fall 2026

CS 3700 (Foundations of AI Reasoning and Decision-Making)

Teaching Assistant

Cornell University
Spring/Fall 2025, Spring 2026**CS 2110 (Object-Oriented Programming and Data Structures)**

Teaching Assistant

Cornell University
Fall 2024**Digital Finance Engineering Major Freshmen Summer Program**

Lecturer

Korea University
Aug 2022/2023**Probability & Statistics**

Teaching Assistant

Korea University
Fall 2022/2023**Convex Optimization**

Teaching Assistant

Korea University
Spring 2022/2023

Service

Reviewer: AISTATS 2026, ICML 2026, NeurIPS 2026

Work Experience

Withcat Software (IT Startup)

Full-stack Software Engineer specialized in Deep Learning

Seoul, South Korea
Apr 2020–Aug 2021

Skills

Programming: Python, PyTorch, Java, Docker, Kubernetes**Languages:** English, Korean