

# Seoyong Lee

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“Everything’s gonna be alright”

## Research Interests

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MATHEMATICAL ALGORITHMS; PARALLEL COMPUTING;

## EDUCATION

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### SEOUL NATIONAL UNIVERSITY

DEPT. OF ELECTRICAL AND COMPUTER ENGINEERING

Leave of absence for alternative military service (01/2023-11/2024)

Anticipated Graduation : February 2026

Seoul, Korea

03/2020–Current

GPA : 4.26/4.3

### KOREA SCIENCE ACADEMY OF KAIST

FIRST HIGH SCHOOL IN KOREA FOR SCIENCE-GIFTED STUDENTS

Graduated with distinction in overall GPA, Awarded by the Mayor of Busan

Busan, Korea

03/2017–02/2020

GPA: 4.27/4.3

## RESEARCH EXPERIENCE

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### ACCELERATED INTELLIGENT SYSTEMS LAB (AISys), SNU

UNDERGRADUATE RESEARCHER WITH [PROF. JINHO LEE](#)

Seoul, S. Korea

04/2024–Current

- Research focus: Graph pattern mining algorithms
- First-author manuscript under review: “AGIS: Fast Approximate Graph Pattern Mining with Structure-Informed Sampling”

## INDUSTRY EXPERIENCE

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### AB180

DATA SCIENTIST

Seoul, S.Korea

10/2023–12/2024

- High-level planning and ideation for diverse projects, including ad attribution algorithms, AppTrackingTransparency (ATT) consent rate optimization, and in-app advertisement (IAA) optimization.
- Developed a Retrieval-Augmented-Generation (RAG) system and further enhanced it into a multi-agent system with expanded functionalities.

### AIRS MEDICAL

RESEARCH SCIENTIST

Seoul, S.Korea

01/2023–10/2023

- Implemented SOTA deep-learning architectures to improve image restoration(denoising, super-resolution) performance and to mitigate artifacts produced by deep learning
- Implemented mathematical algorithms for the MRI reconstruction pipeline, including 3D-SENSE from Philips

## SELECTED HONORS & AWARDS

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### LG OPTIMIZATION GRAND CHALLENGE

2024

- Competition aimed at developing the best-performing algorithm for a variant of the Vehicle Routing Problem (VRP)
- Awarded the Grand Prize (1st place) out of 380 participating teams
- Presented a talk at the Korean Institute of Industrial Engineers Fall Conference

## SAMSUNG COLLEGIATE PROGRAMMING CUP

2024

- The most prestigious individual competitive programming contest in Korea
- 5th Place Award

## NATIONAL SCIENCE TECHNOLOGY SCHOLARSHIP

2022–Current

- Full funding for honorable undergraduates from Korean government
- ~\$10K financial support in total

## ICPC ASIA SEOUL REGIONAL

2021

- Annual competitive programming competition among the universities of the world
- 1st round 14th place
- 2nd round 23rd place

## SCHOLARSHIP FOR ACADEMIC EXCELLENCE

2017-2020, 2021

- ~\$10K financial support over the period

## KOREAN YOUNG PHYSICISTS' TOURNAMENT

2018

- Preliminary round of International Young Physicists' Tournament (IYPT)
- Conducted research on open-ended real-world problems related to physics – “Conical Piles” and “Weighing Time”
- Grand Prize (1st place), Minister of Science and ICT Award

## ACADEMIC ACTIVITIES

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### ACADEMIC MENTOR, SNU

Seoul, S.Korea

SUBJECT : INTRODUCTION TO ALGORITHMS

2022

- Mentoring program governed by ECE department of Seoul National University

### CAMBORNE SCIENCE AND INTERNATIONAL ACADEMY

Camborne, United Kingdom

EXCHANGE STUDENT

07/2019

- expense fully covered by Korea Science Academy of KAIST

### IMPERIAL GLOBAL SUMMER SCHOOL

London, United Kingdom

PROGRAMME: PHYSICS

07/2018

- Science camp with research & cultural experience in Imperial College London
- expense fully covered by Korea Science Academy of KAIST

## SKILLS

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**LANGUAGE** KOREAN(NATIVE), FLUENT ENGLISH

**PROGRAMMING** C++, PYTHON, CUDA, MATLAB

**TOOL** PYTORCH, NUMPY, SCIPY, GUROBI, PANDAS, GIT, DOCKER, LATEX