

SEGWANG KIM

SW engineer / data analyst at Immersive SW Group, Samsung Electronics MX Divison
ksk5693@snu.ac.kr, [Homepage](#), [Github](#), [Google Scholar](#)

My goal is to develop innovative products at the intersection of mathematics and computer science, bridging theory and practical solutions to make a meaningful impact on society.

EDUCATION

Doctor of Philosophy Mar 2016 - Fall 2022
Department of Electrical and Computer Engineering, Seoul National Univ. Seoul, Korea
Advisor: [Kyomin Jung](#)

Bachelor of Science (Cum Laude) Mar 2012 - Feb 2016
College of Liberal Studies, Seoul National Univ. Seoul, Korea
Major: Mathematics, Minor: Statistics

PUBLICATIONS

Conference Proceedings

- Dongryeol Lee*, **Segwang Kim***, Minwoo Lee, Hwanhee Lee, Joonsuk Park, Sang-Woo Lee, Kyomin Jung, [Asking Clarification Questions to Handle Ambiguity in Open-Domain QA](#), Findings of the Association for Computational Linguistics: EMNLP 2023 (Findings of EMNLP) - Dec 2023, Singapore, Singapore [[code](#), [poster](#), [slides](#)]
- Kangil Lee, **Segwang Kim**, Kyomin Jung, [Weakly Supervised Semantic Parsing with Execution-based Spurious Program Filtering](#), The 2023 Conference on Empirical Methods in Natural Language Processing: EMNLP 2023 (EMNLP) - Dec 2023, Singapore [[poster](#), [slides](#)]
- **Segwang Kim**, Hyoungwook Nam, Joonyoung Kim, and Kyomin Jung, [Neural Sequence-to-grid Module for Learning Symbolic Rules](#), AAAI Conference on Artificial Intelligence (AAAI) - 2021, A Virtual Conference [[code](#), [poster](#), [slides](#)]
- Hyoungwook Nam, **Segwang Kim**, Kyomin Jung, [Number Sequence Prediction Problems for Evaluating Computational Powers of Neural Networks](#), AAAI Conference on Artificial Intelligence (AAAI, Oral), Jan 2019, Honolulu, Hawaii, USA [[poster](#), [slides](#)]

Journals

- Taegwan Kang, **Segwang Kim**, Hyeongu Yun, Hwanhee Lee, and Kyomin Jung, [Gated Relational Encoder-Decoder Model for Target-Oriented Opinion Word Extraction](#), IEEE Access 2022

- **Segwang Kim**, Joonyoung Kim, and Kyomin Jung, [Compositional Generalization via Parsing Tree Annotation](#), IEEE ACCESS 2021 [[code](#)]

WORK EXPERIENCE

Software Engineer – Extended Reality

Immersive SW Group, Mobile eXperience Division, Samsung Electronics

Sep2022–Present

Suwon, Korea

- **Calibration: Online / Factory Data Analysis**, Jul 2024–Present
 - Designed and conducted accuracy/repeatability evaluation for multi-camera/IMU-online-calibration.
 - Diagnosed calibration failures via statistical analysis of factory datasets.
 - Built 3D sensitivity analysis simulations.
 - Verified calibration accuracy by modifying OpenCV camera model at source-level.
 - Visualized multi-sensor extrinsics.
- **SLAM**, Sep 2022–Jun 2024
 - Enhanced automated pipelines to evaluate on-device SLAM performance for XR hardware.
 - Boosted reliability of Samsung robotics libraries by producing detailed documentation and comprehensive unit-test suites.

PROJECTS

Moohan — Samsung × Google XR Commercialization

2022 -

I am **primary liaison** to Google’s XR calibration SW team, owning calibration service with on-line calibration features. I have conducted analyses (online-calibration KPIs, factory calibration failure forensics) that informed critical decisions: ThirdEye improvement, calibration-station repair, and multi-IMU-online-calibration launch. I have translated complex concepts such as world-lock and sensor alignment into intuitive visualizations and plain-language docs for Samsung stakeholders.

Improving Reliability of Large-scale Language Models

2021 - 2023

NAVER

In collaboration with NAVER’s language research team, I worked on enhancing the reliability of open-domain QA systems for handling ambiguous user queries. Our efforts resulted in the publication of a top-tier Natural Language Processing conference [paper](#).

- Developing Deep Learning Architecture for Logical Inference** 2019 - 2021
 Samsung Research Funding & Incubation Center for Future Technology
 I spearheaded a research project aimed at designing novel architectures and learning methods to imbue deep learning models with logical inference abilities. Our work led to the publication of papers, including one in a top-tier AI conference [paper](#).
- Developing Automatic Temperature System** 2018 - 2019
 Dasan DNG
 I led the development of a smart thermostat system, bridging the gap between customer requirements and developer plans.
- Rumor Detection on NAVER Blog Spaces** 2017 - 2018
 NAVER
 I proposed a machine learning approach for detecting malicious rumors on social media. Our method, based on XGBoost-based tree boosting, provides insights into which word combinations in a post contribute to its classification as a rumor.
- Improving Japanese-Korean Neural Machine Translation Models** 2016 - 2017
 NAVER
 To address out-of-vocabulary issues in machine translation, I implemented a method from a published paper. This approach covers N^2 words with $2N$ subwords using graph optimization techniques.

HONORS AND AWARDS

- AI Specialist** Sep 2022
 Mobile eXperience division, Samsung Electronics Suwon, Korea
- SNU AIIS Spring Retreat Best Poster Award (3rd place)** April 2021
 Artificial Intelligence Institute Seoul (AIIS) National University Seoul, Korea

INTERNSHIPS

- Undergraduate Research Internship** Summer 2014
[Numerical Computing and Image Analysis Lab](#), Seoul National Univ. Seoul, Korea
 Driven Cavity Problem with 5th WENO Method - Implemented a numerical solution of Navier-Stokes equations to describe fluid dynamics in a 2D rectangle with obstacles using C++.
 Advisor: [Myeongju Kang](#)

PROGRAMMING SKILLS

- C++: OpenCV, Robotics Library
- Python: pandas, pyquaternion, scipy, PyTorch, TensorFlow
- Bash
- MATLAB

CORE COMPETENCE

- Strong mathematical foundation, e.g., state estimation, $SO(3)$ Lie algebra, statistics, applied to computer vision and XR.
- Fast, detail-oriented learner who seeks deep understanding.
- Clear, concise technical writing with mathematical rigor.

EXTRACURRICULAR ACTIVITIES

Sports

Soccer	Spring 2012 -
• 1st place, SNU President's Cup Soccer Tournament	Spring 2015
• 1st place, SNU President's Cup Soccer Tournament	Spring 2013

Swimming

Summer 2016 -

Tennis

Summer 2017 -

Last Updated: July 19, 2025