

Sooyong Shin

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Interest

I am interested in **Computer Vision Systems** for **Robot** perception, with a particular focus on **Visual SLAM**. Also interested in **Vision Language Navigation**, leveraging **Multimodal models** for more intuitive and efficient communication.

Currently, I am taking courses in **Robot Control and Graph Neural Networks (GNN)**, and studying the **Robot Operating System (ROS)** through an Individual Study. I am also actively broadening my understanding across other areas in robotics.

Keywords: Robotics, Visual SLAM, Vision Language Models, ROS

Education

Korea Advanced Institute of Science and Technology	<i>Daejeon, South Korea</i>
<i>Bachelor of Science, Electrical Engineering, and Computer Science</i>	<i>Feb 2018 – Present</i>

Work Experience

Individual Study	<i>KAIST, Daejeon, South Korea</i>
<i>Studying ROS in URL Lab (Supervisor: Hyun MYUNG)</i>	<i>Mar 2025 – Present</i>
<i>Studying Vision Language Multimodal in SIIT Lab (Supervisor: Junmo Kim)</i>	<i>Jul 2024 – Aug 2024</i>

KC-ML2	<i>Seoul, South Korea</i>
<i>Research Intern</i>	<i>Aug 2024 – Feb 2025</i>

- Research on **Relocalization for Robot Mapping**
- Focused on **Text-based Failure Recovery** in Monocular **Visual SLAM**
- Manuscript in preparation. **First author** work conducted during the internship at **KC-ML2** (2024–2025).
- Skills: C++, Python, ORB SLAM, YOLO, paddle OCR

Bookend	<i>Daejeon, South Korea</i>
<i>Software Engineer</i>	<i>May 2023 – Aug 2024</i>

- Developed **Sentensify** ([chrome webstore](#)), a multilingual AI writing and paraphrasing tool leveraging various **Large Language Models**
- Role: Full-Stack Engineer
- Skills: JavaScript(React), Python(FastAPI), MongoDB, ChatGPT API

<i>Software Engineering Intern</i>	<i>Dec 2022 – Feb 2023</i>
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- Developed **TYPHERE**, a writer-publisher **mobile platform** designed to streamline and enhance the book publishing process
- Role: Front-End Engineer
- Skills: JavaScript(React-Native)

Projects

KAIST Swimming Team KAORI Webpage	<i>2024</i>
<ul style="list-style-type: none"> ◦ Developed a webpage to archive swimming records and member information, enabling analysis of performance trends and data distribution (www.kaist-kaori.org) ◦ Role: Full-Stack developer ◦ Skills: JavaScript(React), Python(Fast API), MongoDB 	

Skills

ML/DL: PyTorch

Robotics: ROS, Visual SLAM (ORB-SLAM)

Programming: Python, C++, JavaScript(TypeScript)

Database: MongoDB, SQL

others: React/React-Native, FastAPI, Jira, Confluence

Leadership Experience

KAIST MR(Microbot Research)

member [🔗](#)

Daejeon, South Korea

Mar 2025 – Present

AI Robotics KR

Community Manager [f](#) [🔗](#)

South Korea

Oct 2024 – Present

Republic of Korea Army

Sergeant, honorable discharge

Paju, South Korea

Mar 2019 – Nov 2020

Korean Red Cross Lifeguard

Daejeon, South Korea

Aug 2018 – Present

KASIT Swimming Team KAORI

Senior member

Daejeon, South Korea

Mar 2018 – Present

President of KAORI

2022

Chairman of KAIST Swimming Competition

2023