Yeonsang Shin

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EDUCATION

Seoul National University   Seoul, Korea
B.S. in Electrical and Computer Engineering   *Mar 2019 - Aug 2025 (Expected)*
- **GPA:** 4.06/4.3 (3.93/4.0)
* Mandatory Military Service Included (2021-2023)

Seoul Science High School   Seoul, Korea
High school diploma   *Mar 2016 - Feb 2019*

RESEARCH EXPERIENCES

Visual Computing Lab, KAIST   Daejeon, Korea
Research Intern (Advisor: Prof. Min H. Kim)   *Jan 2025 - Feb 2025 (Expected)*
- **Visual SLAM.** Studying the basics of Visual SLAM.

KRAFTON Inc., Deep Learning Div.   Seoul, Korea
AI Researcher Intern (Advisor: Prof. Kangwook Lee)   *Jun 2024 - Dec 2024*
- **3D Computer Vision.** Conducted research on 3D computer vision problems: novel view synthesis for unposed images / 3D inpainting, approaching these challenges as inverse problems through diffusion models.
- **AI-Driven Life Simulation (inZOI Project).** Engineered autonomous agent behavior systems using Small Language Models (SLMs) to enable dynamic action selection, strategic planning, and contextual reasoning for in-game characters.

SK Telecom   Seoul, Korea
AI Fellowship (Contract, Advisor: Taeyoung Na)   *May 2024 - Oct 2024*
- **Animated Layout Generation.** Proposed a first-ever approach to extend layout generation by incorporating temporal dynamics; collaborated with GST Media Gen AI Team, first-author paper under review.

Computer Vision Lab, Seoul National University   Seoul, Korea
Research Intern (Advisor: Prof. Bohyung Han)   *Jan 2024 - Jun 2024*
- **Autoregressive Generation.** Developed a first-ever method to jointly generate continuous and discrete values in an autoregressive manner; first-author paper under review, research supported by Samsung Electronics.

Data Science & Artificial Intelligence Lab, Seoul National University   Seoul, Korea
Research Intern (Advisor: Prof. Sungroh Yoon)   *Mar 2023 - Dec 2023*
- **Image Composition.** Studied the basics of AI / Computer Vision and solved the novel task of 'Subject-Driven Image Composition for Accessories.'

AWARDS & HONORS

Presidential Science Scholarship   *Jan 2019 - Present*
A full 4-year scholarship awarded for outstanding research performance in high school. $5,500 awarded every semester for full tuition and living expenses by the Government of South Korea.

1st/16 Teams, SK Telecom AI Fellowship   *Nov 2024*
Won first place among 16 teams in the fellowship research competition; awarded $2,500 prize.

SK Telecom AI Fellowship   *May 2024 - Oct 2024*
Selected for proposed research in dynamic layout generation; awarded $4,300 research grant and opportunity to collaborate with industry researchers.

KRAFTON AI Fellowship   *Jan 2024*
Selected Top 6 among 1,000 participants in a competitive process. Awarded a research grant $7,500 and an internship offer.

Specialized Semiconductor Program Scholarship   *Nov 2023 - Present*
Awarded $750 upon selection and an additional $7,500 upon graduation for high-achieving students.

3rd/144 Teams, SNU FastMRI Challenge   *Jul 2023 - Aug 2023*
A significant competition held independently in the university, inspired by the FastMRI competition hosted by Meta. Presented a deep neural network for MRI reconstruction with undersampled data under restricted conditions.

Military Service Honored Family   *Feb 2023*
Awarded for family's three-generation legacy of serving as active-duty soldiers. 457 months of military service by six members, elite 0.2% of Korean men as of 2023.

Teaching Assistant

FastMRI Challenge 2024 TA, Seoul National University — Seoul, Korea
Contest Coordinator (Advisor: Prof. Jongho Lee) — *Apr 2024 - Aug 2024*
Organized and supervised the contest with 160 participating teams, including the preparation of the challenge dataset, development of baseline codes, creation of guideline videos, and addressing issues. Managed GPU servers and evaluated the models submitted at the contest's conclusion.

Internships & Experiences

Theta One, Inc. — Seoul, Korea
Deep Learning Engineer (Internship, Part-time) — *Nov 2022 - Jan 2023*
- **Nonsense Detection** Developed a model to detect and classify various nonsense inputs, especially mild gibberish.

Republic of Korea Defense Communication Command — Gwacheon-si, Korea
Military Service — *Aug 2021 - Feb 2023*
- **Telecommunications System** Maintained military microwave communication systems, providing backup supports for telecommunication stations.
- **System Upgrades** Implemented new devices like spectrum analyzers to enhance telecommunication network stability.

DESILO, Inc. — Seoul, Korea
Software Developer (Internship) — *Apr 2021 - Jul 2021*
- **Python-PALISADE Project** Implemented and distributed a Python wrapper for PALISADE, a C++ library for Homomorphic Encryption.
- **Research on Google FHE Transpiler** Tested the stability and performance of the Google FHE Transpiler and presented adoptable ideas for the company.
- **DESILO HE Library** Contributed to building internal APIs for the DESILO HE Library
- **WebAPI** Developed an MVP website using FastAPI and MySQL.

Activities and Societies

- **Young Engineers Honor Society** Full Member, sponsored by the National Academy of Engineering of Korea (Jan '23 - Present). Served as the Department Head of Strategy & Planning 3 Department in 2024.
- **STEM: SNU Tomorrow's Engineers Membership** Honor Society in College of Engineering, SNU (Sep '24 - Present)
- **SNU Buddy Program** Organized and participated in activities and events for international exchange students. Awarded the Best Group Award for both semesters (Aug '23 - Jun '24).
- **Dream Consultant** Mentored high school students on materializing their dreams (Jul '23).
- **Student Council, Dept. of ECE** Planning team member (Feb '20 - Aug '21).
- **Festival Planning Team** Affiliated with Seoul National University (Feb '21 - Jul '21).
- **Student Council, College of Engineering** Welfare team member (Feb '20 - Nov '20).
- **Student Council, College of Engineering** Design team member (Mar '19 - Nov '19).
- **Engineering Volunteers** Mentored underprivileged students in technology (Aug '19).
- **Invention Club** Club Captain for 3 years, won an award at the Korean Student Invention Exhibition (Mar '16 - Feb '19).
- **Science Debating Club** Club Captain for 1 year, orchestrated the largest student-held forum attended by most faculty members (Mar '17 - Feb '18).
- **Orchestra Club** Played the cello for 2 years, contributing to school performances and events (Mar '16 - Feb '18).

Side Projects

NextFeed (HCI Class Project) — *Mar 2023 - Jun 2023*
An AI service that analyzes your Instagram profile and selects photos to upload. Completed the Django-based AI backend server utilizing the CLIP model.

Weathy (Side Project) — *Dec 2020 - Mar 2021*
A personalized weather delivery mobile application with 1000+ downloads. Led the server team using NodeJS, MySQL, Amazon EC2, Amazon RDS, PM2

TutorDot (Side Project) — *Aug 2020 - Jan 2021*
Tutoring management application for tutors and tutees, released on App Store and Google Play. Led a team of 14 as a Product Manager.

Pause (Hackathon) — *Nov 2020*
Effective time management application for YouTube. Served as a back-end developer using NodeJS and MySQL.

Skills & Languages

- **Programming Languages**	Python, C/C++, JavaScript, MATLAB
- **Frameworks/Libraries**	PyTorch, TensorFlow, Git, Docker, SQL, Amazon AWS, pandas
- **Languages**	English(Full proficiency; TOEFL iBT 109), Korean(Native)