Taeyoon Kim

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in Taeyoon Kim | ○ taeraemon |

Seoul, Republic of Korea

EXPERIENCE

• **Perigee Aerospace [⊕]** *Feb 2023 - Jan 2024*
Engineer, Flight Control Team (Dynamics & Control) Daejeon, South Korea
◦ Developed avionics firmware for the suborbital launch vehicle BW0.4
◦ Developed inspection software for BW0.4
◦ Developed an IRIG 313-01 compliant flight termination system (FTS) for BW0.4
◦ Performed HILS, WDR, and static fire tests for BW0.4

• **S.O.X [⊕]** *May 2021 - Aug 2022*
Freelancer Seoul, South Korea
◦ Participated in the development of indoor localization using GPR
◦ Developed a mobile app for collecting WiFi, BLE, and LTE signals
◦ Developed an LTE-based signal collecting tag

EDUCATION

• **Seoul National University** *Mar 2024 - Present*
M.S. in Intelligent Aerospace Systems (Interdisciplinary Program) Seoul, South Korea
◦ GPA: 3.89/4.3

• **Kwangwoon University** *Mar 2019 - Feb 2023*
B.S. in Electronic and Communications Engineering Seoul, South Korea
◦ GPA: 3.61/4.5

PROJECTS

• **Integrated Navigation Systems for Precision Landing of Reusable Launch Vehicles** *Jan 2025 - Present*
Tools: MATLAB, Python, C/C++, ROS2, Gazebo Hanwha Aerospace
◦ Developing integrated navigation algorithms to achieve high altitude accuracy during the landing phase of reusable launch vehicles

• **Artificial Intelligence Research Laboratory for Flight Control** *Feb 2024 - Present*
Tools: MATLAB, Python Agency for Defense Development
◦ Conducted research on methodologies for selecting and detecting valid targets in infrared imagery, focusing on reliable extraction of meaningful target data
◦ Developed AI-based tracking algorithms to enable robust and accurate tracking of detected targets in infrared video

PATENTS AND PUBLICATIONS   C=CONFERENCE, J=JOURNAL, P=PATENT, S=IN SUBMISSION, T=THESIS

[C.3] T. Y. Kim, C. G. Park (2025). **Performance Evaluation of Infrared Target Tracking Method in Virtual Environment**. In *Proceedings of the KSAS 2025 Spring Conference*, Korean Society for Aeronautical and Space Sciences (KSAS), Paper No. 1075–1076. 2025.

[C.2] T. Y. Kim, C. G. Park (2024). **Performance Analysis of Siamese Tracker Through Preprocessing of Infrared Images**. In *2025 17th International Conference on Knowledge and Smart Technology (KST)*, Bangkok, Thailand, 2025, pp. 1-4, doi: 10.1109/KST65016.2025.11003338.

[C.1] T. Y. Kim, I. H. Lee, C. G. Park (2024). **Infrared Target Tracking Method Based on Siamese Network with Template Update**. In *Proceedings of the KSAS 2024 Fall Conference*, Korean Society for Aeronautical and Space Sciences (KSAS), Paper No. 1292–1293. 2024.

Skills

- **Programming Languages:** C, C++, Python, MATLAB, Simulink, Verilog, Assembly
- **Libraries:** ROS1, ROS2, PyTorch, PyQt
- **Embedded Systems:** STM32, Altera, Arduino
- **Hardware design:** EasyEDA, KiCad, Altium, Orcad(Virtuoso, Hspice, Capture, PSpice), Inventor
- **Simulation:** Gazebo, Unity

Honors and Awards

• Grand Prize - 22nd Korea Robot Aircraft Competition (AAM Tech Challenge)　　　　　　*Oct 2024*
Ministry of Trade, Industry and Energy (MOTIE), Republic of Korea
  ◦ Awarded the **grand prize** as a member of the SNU team *"Bulnabi"* for outstanding performance in UAV development and innovation.

Certifications

• Class 3 Amateur Radio Operator (Morse Code)　　　　　　*Jun 2020*

References

1. **Chan Gook Park**
   Professor, Department of Aerospace Engineering
   Seoul National University
   Email: chanpark@snu.ac.kr
   Phone: +82-2-880-7308
   Relationship: Advisor during M.S. program