Taeyoon Kim

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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.1] Your Name, et al. (Year). **Title of Conference Paper**. In *Name of Conference Proceedings*, pp. XX-XX. Publisher. Date, Location. DOI: XX.XXXX/XXXXXXX.XXXX.XXXXXXX

[S.1] Your Name, et al. (Year). **Title of Submitted Paper**. Manuscript submitted for publication in *Journal Name*.

[P.1] Inventor 1, Your Name, Inventor 3, et al. (Year). **Title of Patent**. Patent Office, Patent No. XXXXXXXXX. Registration Date: Date, Grant Date: Date, Publication Date: Date.

[J.1] Author 1, Your Name, Author 3, et al. (Year). **Title of Journal Article**. *Journal Name*, Vol. XX, Issue X, pp. XXX-XXX. DOI: XX.XXXX/XXXXX.XXXX.XXXXXXX

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