MINSIK JEON

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EDUCATION

- **Carnegie Mellon University** — Pittsburgh, PA
  Master of Science in Robotics (Advisor: Prof. Shubham Tulsiani) — *Aug. 2025 – Present*
- **Korea Advanced Institute of Science and Technology (KAIST)** — Daejeon, Korea
  Bachelor of Science in Computer Science — *Mar. 2018 – Feb. 2022*
  Bachelor of Science in Electrical Engineering
  GPA: 4.01/4.30; Dean's List 3 semesters ; ***Summa Cum Laude***

RESEARCH EXPERIENCE

- **Physical Perception Lab, Carnegie Mellon University** — Pittsburgh, PA
  Graduate Research Assistant — *Sep. 2025 – Present*
  - Researched 3D/4D reconstruction, positional encoding for multi-view inputs, and novel-view synthesis methods.
- **Agency for Defense Development** — Daejeon, Korea
  Research Officer for National Defense, Republic of Korea Army — *Apr. 2022 – May. 2025*
  - Researched robust perception model for autonomous driving systems, while completing mandatory military service.

PUBLICATIONS

* indicates equal contribution, † indicates equal advising.

1. **Live4D: Latent Tracking for Streaming 4D Reconstruction**
   Minsik Jeon, Jay Karhade, Deva Ramanan†, Shubham Tulsiani†.
   Under Review, 2026. [link]
2. **Memor: Scaling Flexible Memory Decoding for Spatial Intelligence**
   Nikhil Keetha, 7 more authors, Minsik Jeon, 15 more authors, Peter Kontschieder
   Under Review, 2026.
3. **Point4D: Long-range 4D Motion Reconstruction**
   Minsik Jeon, Jay Karhade, Deva Ramanan†, Shubham Tulsiani†.
   Advances in Neural Information Processing Systems **(NeurIPS)**, 2026 **(Spotlight)**. [link] [project page]
4. **RayRoPE: Projective Ray Positional Encoding for Multi-view Attention**
   Yu Wu, Minsik Jeon, Jen-Hao Rick Chang, Oncel Tuzel, Shubham Tulsiani.
   European Conference on Computer Vision **(ECCV)**, 2026 **(Spotlight)**. [link] [project page]
5. **Novel View Synthesis as Video Completion**
   Qi Wu, Khiem Vuong, Minsik Jeon, Srinivasa Narasimhan, Deva Ramanan.
   European Conference on Computer Vision **(ECCV)**, 2026. [link] [project page]
6. **Flow3r: Factored Flow Prediction for Visual Geometry Learning**
   Zhongxiao Cong, Qitao Zhao, Minsik Jeon, Shubham Tulsiani.
   IEEE/CVF Conference on Computer Vision and Pattern Recognition **(CVPR)**, 2026. [link] [project page]
7. **Evidential Ellipsoidal BKI with Anisotropic Gaussians for Uncertainty-aware Continuous Semantic Mapping**
   Junyoung Kim, Minsik Jeon, Jihong Min, Kiho Kwak, Junwon Seo.
   IEEE Robotics and Automation Letters **(RA-L)**, 2026. [link] [project page]
8. **OW-Rep: Open World Object Detection with Instance Representation Learning**
   Sunoh Lee, Minsik Jeon*, Jihong Min, Junwon Seo.*
   IEEE/CVF Winter Conference on Applications of Computer Vision (**WACV**), 2026. [link] [project page]

9. **DA-RAW: Domain Adaptive Object Detection for Real-World Adverse Weather Conditions**
   *Minsik Jeon**, *Junwon Seo**, *Jihong Min*.
   IEEE International Conference on Robotics and Automation (**ICRA**), 2024. [link] [project page]
10. **Improving Open-World Object Detection through Richer Instance Representation using Vision Foundation Models**
    *Minsik Jeon**, *Sunoh Lee**, *Junwon Seo*.
    IROS Workshop on Label Efficient Learning Paradigms for Autonomy at Scale, 2024 [link]

Work Experience

- **Agency for Defense Development - Defense AI Center** — Daejeon, Korea
  Research Officer for National Defense — *Jun. 2022 – May 2025*

  - **Project: Multi-robot Cooperative Autonomous Driving**
    – Develop a BEV traversability map by combining traversability estimates from multiple UGVs and UAVs for off-road autonomous driving, including sensor data integration and uncertainty-aware mapping.
  - **Project: Deformable Object Recognition Technology**
    – Researched an open-world object detection and instance representation learning method using foundation models, enhancing the reliability and adaptability of detectors in off-road environments with unknown objects.
    – Devised an unsupervised domain adaptation method to improve robustness of detector in adverse weather.

- **Neuro-Instrumentation and Computational Analysis Lab, KAIST** — Daejeon, Korea
  Undergraduate Researcher, advised by Prof. Young-Gyu Yoon — *Oct. 2021 – Feb. 2022*

  - **Project: Microscopy Image Artifact Removal and Super-Resolution**
    – Built a super-resolution network for light sheet microscopy images using a 3D style transfer model and confocal microscopy data, improving the quality of 3D microscopy images by removing line artifacts.

- **Unmanned System Research Group, KAIST** — Daejeon, Korea
  Undergraduate Researcher, advised by Prof. David Hyunchul Shim — *Jun. 2021 – Sep. 2021*

  - **Project: Indy Autonomous Challenge (IAC)**
    – Developed the detection and tracking algorithm and the overtaking policy for the Indy Autonomous Challenge (IAC), the first autonomous car racing competition, as an intern of Team KAIST ***(Achieved 4th place)***.
- **SK Hynix** — Seongnam, Korea
  Winter Intern — *Dec. 2019 – Feb. 2020*

  - **Project: Performance and Operation Analysis of On-board RAID**
    – Analyzed the performance and operations of each On-board RAID option ***(Selected as Best Intern Project)***.

Scholarships

- **Korean Government Scholarship Program for Study Overseas** — *Aug. 2025 – Aug. 2027*
  National Institute for International Education
- **National Excellence Scholarship for Science and Engineering** — *Mar. 2020 – Feb. 2022*
  Korea Student Aid Foundation
- **National Scholarship for Undergraduate Study** — *Mar. 2018 – Feb. 2020*
  Korea Student Aid Foundation

Reviewer Service

- IEEE International Conference on Robotics and Automation (**ICRA**) — *2026*
- IEEE/RSJ International Conference on Intelligent Robots and Systems (**IROS**) — *2026*

Extracurricular Activities

- **32th Class of Professional Officer** *2022 – 2025*
  Military Service, First Lieutenant, Republic of Korea Army
- **Young Engineers Honor Society (YEHS)** *2021 – Present*
  Association of Korean engineering students under the National Academy of Engineering of Korea
- **Nanyang Technological University Summer Exchange Student** *2019*
  Short-term (6 weeks) exchange student at Nanyang Technological University (NTU)
- **KAIST Freshman Student Council** *2018 – 2019*
  Student Council for Freshmen at KAIST

Skills

- **Programming Languages:** Python, C, C++, MATLAB
- **Technologies:** PyTorch, ROS2, ROS1, Docker, Linux, GIT, OpenCV
- **Languages:** Korean (Native), English (Fluent, TOEFL iBT 105, GRE 153/170/4.0)