

KHANG TRUONG GIANG

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Interested in building autonomous systems to reconstruct and understand the 3D world from 2D images

EDUCATION

Korea Advanced Institute of Science and Technology (KAIST) *Daejeon, South Korea*
Ph.D. in Computer Science 09/2021 – 08/2024
Advisors: Prof. Sungho Jo, Prof. Soohwan Song. Research Interests: **3D Reconstruction**

Korea Advanced Institute of Science and Technology (KAIST) *Daejeon, South Korea*
M.S. in Computer Science 09/2019 – 08/2021

Hanoi University of Science and Technology (HUST) *Hanoi, Vietnam*
B.Sc. in Computer Science (School of ICT Talent Program) 09/2013 – 08/2018
GPA: 3.62 / 4.0 | Graduation with Honors (**Excellent Degree**).

PROFESSIONAL EXPERIENCE

42dot (Global Software Center of Hyundai Motor Group) *South Korea*
3D Vision Engineer 07/2024 – Present

- **Autonomous Driving Perception:** Architected and trained robust multi-camera perception models, including 2D/3D object detection, 3D traffic light detection, and diffusion-based trajectory planning.
- **Real-Road Deployment:** Developed long-range models detecting distant objects up to **150 m** and traffic light signals up to **90 m**, enabling **end-to-end autonomous driving**
- **Data Engineering:** Built automated and pseudo-labeling models to systematically generate large-scale datasets, accelerating perception model training cycles.
- **Peer Recognition:** Voted by team members for exceptional contributions to the autonomous driving product, earning a **company-sponsored merit workcation to Jeju Island (2024)**.

Neuro-Machine Augmented Intelligence Lab, KAIST *South Korea*
Graduate Researcher 09/2018 – 06/2024

- **3D Vision Research:** Conducted cutting-edge research in core 3D reconstruction areas, including high-precision feature matching, visual localization, and multi-view depth estimation.
- **Framework Architecture:** Authored, open-sourced, and actively maintained influential research repositories on GitHub, including:
 - **CDS-MVSNet:** An accurate, efficient learning-based multi-view stereo network.
 - **TopicFM / TopicFM+:** A highly robust, efficient, and interpretable image matching model.
 - **DeViLoc:** A semi-dense visual localization system designed for robust spatial awareness.
- **Scientific Impact:** Published **9 papers** at premier AI, CV, and Robotics venues (CVPR, AAAI, ICLR, IJCAI, IEEE TIP, etc.)

Viettel High Technology Industries Corporation *Hanoi, Vietnam*
Software Engineer 09/2018 – 06/2019

- **Predictive Analytics:** Built a robust machine learning pipeline to analyze and predict user activity levels across the telecommunications network.
- **API Deployment:** Containerized and deployed the models as production Web APIs using Flask.

SELECTED PUBLICATIONS

- [C4] B. Lee, J. Park, **Khang Truong***, and S. Song*. “Online 3D Gaussian Splatting Modeling with Novel View Selection.” *Proc. 34th International Joint Conference on Artificial Intelligence (IJCAI)*, 2025. (**Top-tier in AI**; *Corresponding Authors)
- [J5] B. Lee, J. Park, **Khang Truong**, S. Jo, and S. Song. “MVS-GS: High-Quality 3D Gaussian Splatting Mapping via Online Multi-View Stereo.” *IEEE Access*, 2025. (Impact Factor: 3.6)

- [C3] **Khang Truong**, S. Song, and S. Jo. “Learning to Produce Semi-dense Correspondences for Visual Localization.” *IEEE/CVF Conf. on Computer Vision and Pattern Recognition (CVPR)*, 2024. (**Oral, top 3.3% — 90 of 2,719**)
- [J4] **Khang Truong**, S. Song, and S. Jo. “TopicFM+: Boosting Accuracy and Efficiency of Topic-Assisted Feature Matching.” *IEEE Transactions on Image Processing (TIP)*, 2024. (**Impact Factor: 15.3**)
- [C2] **Khang Truong**, S. Song, and S. Jo. “TopicFM: Robust and Interpretable Topic-assisted Feature Matching.” *AAAI Conf. on Artificial Intelligence (AAAI)*, 2023. (**Acceptance rate 19.6% of 8,777**)
- [J3] J. Mun, **Khang Truong**, Y. Lee, N. Oh, S. Huh, M. Kim, and S. Jo. “HybGrasp: A Hybrid Learning-to-Adapt Architecture for Efficient Robot Grasping.” *IEEE Robotics and Automation Letters (RA-L)*, 2023. (Impact Factor: 5.2)
- [J2] S. Song*, **Khang Truong***, D. Kim, and S. Jo. “Prior depth-based multi-view stereo network for online 3D model reconstruction.” *Pattern Recognition*, 2023. (Impact Factor: 8.0; *Co-first Author)
- [C1] **Khang Truong**, S. Song, and S. Jo. “Curvature-guided dynamic scale networks for multi-view stereo.” *International Conference on Learning Representations (ICLR)*, 2022. (**Top-tier in ML/DL**)
- [J1] **Khang Truong**, S. Song, D. Kim, and S. Choi. “Sequential Depth Completion With Confidence Estimation for 3D Model Reconstruction.” *IEEE Robotics and Automation Letters (RA-L)*, 2020. (Impact Factor: 5.2)

HONORS AND AWARDS

- **Outstanding Reviewer Award**, Conference on Computer Vision and Pattern Recognition (CVPR) 2024
- **Silver Medal (Top 9%)**, Kaggle Image Matching Challenge 2023
- **Hyundai Motor Chung Mong-Koo Scholarship** for outstanding PhD students 2021 – 2024
- Full Graduate Scholarship, KAIST Master’s Program 2019 – 2021
- Excellence Academic Scholarship, HUST 2018
- Lotte Scholarship for outstanding university students 2017
- **Certificate of Excellence (Ranked 1st in academic cohort)**, HUST 2014
- **Third Prize**, Vietnam Mathematical Olympiad (VMO) for High School Students 2013

ACADEMIC ACTIVITIES & SERVICE

- **Conference Reviewer**: actively participate in top-tier conferences (CVPR, ICCV, AAAI, NeurIPS)
- **Journal Reviewer**: IEEE TIP (2024), IEEE TCSVT (2023), IEEE RA-L (2023), IEEE T-ASE (2024)
- **Mentorship**: Academic Mentor advising two undergraduate and master’s students in research initiatives.

COMPUTER SKILLS

- **Programming**: Python (Advanced), C/C++ (Basic)
- **Frameworks**: PyTorch (Advanced), PyTorch Lightning (Intermediate)
- **Tools**: Linux (Advanced), LaTeX, Git. Adaptive and swift learner of new technical tools/frameworks.