

Khang Truong Giang

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Profile

Name **Khang Truong Giang**
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Address KAIST, 291 Daehak-ro, Yuseong-gu, Daejeon 34141, South Korea

Education

2021–2024 **PhD in Computer Science (expected graduation in August).**

Korea Advanced Institute of Science and Technology (KAIST)

Advisors: Prof. [Sungho Jo](#), Prof. [Soohwan Song](#)

Research interests: 3D reconstruction, image matching, visual localization, depth estimation.
My ultimate goal is to build an autonomous system that can model and understand our real world from 2D images.

2019–2021 **MS in Computer Science.**

Korea Advanced Institute of Science and Technology (KAIST)

GPA – 3.8/4.3

2013–2018 **B.Sc.**, Hanoi University of Science and Technology (HUST), Vietnam.

School of Information and Communication Technology – Talent Program

GPA–3.62/4.0 – Graduation with Honors (Excellent Degree)

Publications

- [C4] **Khang Truong**, Soohwan Song, and Sungho Jo. "Learning to Produce Semi-dense Correspondences for Visual Localization." *Computer Vision and Pattern Recognition Conference (CVPR)* 2024. (**Oral talk, top 90/2719 = 3.3% of accepted papers**)
- [arXiv] **Khang Truong**, Soohwan Song, and Sungho Jo. "TopicFM+: Boosting Accuracy and Efficiency of Topic-Assisted Feature Matching." *Under review at IEEE TIP*
- [C3] **Khang Truong**, Soohwan Song, and Sungho Jo. "TopicFM: Robust and Interpretable Topic-assisted Feature Matching." *AAAI Conference on Artificial Intelligence (AAAI)*, 2023. (**top-tier in AI**, acceptance rate: 19.6% of 8,777 submissions)
- [J4] Mun J, **Khang Truong**, Lee Y, Oh N, Huh S, Kim M, Jo S. "HybGrasp: A Hybrid Learning-to-Adapt Architecture for Efficient Robot Grasping". *IEEE Robotics and Automation Letters* 2023 (**Impact Factor: 5.2**)
- [J3] Soohwan Song*, **Khang Truong***, Daekyum Kim, and Sungho Jo. "Prior depth-based multi-view stereo network for online 3D model reconstruction." *Pattern Recognition* 2023 (**Impact Factor: 8.0**, *co-first author)
- [C2] **Khang Truong**, Soohwan Song, and Sungho Jo. "Curvature-guided dynamic scale networks for multi-view stereo." *International Conference on Learning Representations (ICLR)*, 2022. (**top-tier in ML/DL**)

- [J2] **Khang Truong**, Soohwan Song, Daekyum Kim, and Sunghee Choi. "Sequential Depth Completion With Confidence Estimation for 3D Model Reconstruction." *IEEE Robotics and Automation Letters* 6, no. 2 (2020): 327-334. (**Impact Factor: 5.2**)
- [J1] Vu Dieu, **Khang Truong**, Khanh Nguyen, Ngo Van Linh, and Khoat Than. "Revisiting Supervised Word Embeddings." *Journal of Information Science & Engineering* 38, no. 2 (2022).
- [C1] Khoat Than, Xuan Bui, Tung Nguyen-Trong, **Khang Truong**, Son Nguyen, Bach Tran, Linh Ngo Van, and Anh Nguyen-Duc. 2019. "How to make a machine learn continuously: a tutorial of the bayesian approach". In *Artificial Intelligence and Machine Learning for Multi-Domain Operations Applications*, volume 11006, page 110060I.

Honors and Awards

- 2023 **Top 9% (Silver Medal)** on the Kaggle Image Matching Challenge
- 2021–now **Hyundai Motor Chung Mong-Koo Scholarship** for outstanding PhD students
- 2019–2021 **Full KAIST Scholarship** for Master’s program
- 2018 **Excellence Scholarship** from HUST for outstanding performance
- 2017 **Lotte Scholarship** for outstanding students
- 2014 **Certificate of Excellence** from HUST for the first ranked student
- 2013 **Third prize in Vietnam Mathematical Olympiad** for high school students

Experience

- 2019 – now **Research Assistant**, *Neuro-Machine Augmented Intelligence Lab*, KAIST, South Korea.
 - worked on some tasks of 3D reconstruction including feature matching, visual localization, and depth estimation.
 - published papers at prestigious conferences (CVPR, AAAI, ICLR) and journals (Pattern Recognition, IEEE Robotics and Automation Letters).
 - actively maintain and contribute research code on GitHub: [CDS-MVSNet](#) — an accurate learning-based multi-view stereo method, [TopicFM](#) — a robust and efficient image matching model, and [DeViLoc](#) — a semi-dense visual localization system.
- 2018 – 2019 **Software Engineer**, *Viettel High Technology Industries Corporation*, Hanoi, Vietnam.
 - built a robust machine learning model to predict user activity levels in the telecommunication network.
 - deployed the model as a Web API by using Flask.
- 2016 – 2018 **Undergraduate Research Intern**, *Data Science Lab*, HUST, Vietnam.
 - implemented and released [open-source code](#) for various topic modeling methods.
 - co-authored two papers about text mining using topic models.

Academic Activities

- Reviewer **Conferences:** *CVPR 2024* (top-tier conference in Computer Vision)
- Journals:**
 - *IEEE Transactions on Image Processing 2024*
 - *IEEE Transactions on Circuits and Systems for Video Technology 2023*
 - *IEEE Robotics and Automation Letters 2023*
 - *IEEE Transactions on Automation Science and Engineering 2024*
- Mentor advising two undergraduate students to do research.
- TA Course: IT4040 – Artificial Intelligence, SoICT, HUST (from August to December 2017)

Computer skills

Programming PYTHON (advanced), C/C++ (basic)

Framework Pytorch (advanced), Pytorch Lightning (intermediate)

Miscellany Linux (advanced), L^AT_EX. Able to learn a new tool/framework quickly

Languages

Vietnamese Mother tongue

English Advanced Level