

ZHIYUAN YOU

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Education

- **Ph.D. in Information Eng., The Chinese University of Hong Kong** Aug. 2023 -
 - Supervisor: Professor Chao Dong & Professor Tianfan Xue
- **M.Eng. (Honor) in Mechanical Eng., Shanghai Jiao Tong University** Sept. 2020 - Mar. 2023
 - GPA: 3.76/4.0
 - Supervisor: Professor Xinyi Le & Professor Yu Zheng
- **B.Eng. (Honor) in Mechanical Eng., Shanghai Jiao Tong University** Sept. 2016 - Jun. 2020
 - GPA: 89.36/100, Ranking: 5/148
 - Supervisor: Professor Xinyi Le
 - Summer Exchange to *Columbia University* in 2018

Working Experience

- **Research Intern, Horizon Robotics** Dec. 2022 - Mar. 2023
 - Direction: Perception Algorithm in Automatic Driving
 - Leader: Marvin Yu, Director of the Perception Group
 - Achievements:
 - ◇ Improved the FCOS-based detection baseline to detect objects including cars, car rears, pedestrians, and cyclists, increased by ~20% in driving scenarios, replaced existing mono products.
- **Research Intern, SenseTime** Dec. 2020 - Nov. 2022
 - Direction: Anomaly Detection, Few-Shot Learning
 - Leader: Kai Yang, Senior AI Engineer
 - Achievements:
 - ◇ Designed an anomaly detection algorithm, published in NeurIPS 2022 and ICONIP 2022, deployed in two projects (high-speed rail quality inspection, auto parts quality inspection), became the key algorithm of *Shenquan Industrial Training and Inferring Platform*.
 - ◇ Designed a few-shot object counting algorithm, published in WACV 2023.

Publications

- **Preprint**
 - K. Zhu, J. Gu, **Z. You**, Y. Qiao, C. Dong, “An Intelligent Agentic System for Complex Image Restoration Problems,” arXiv preprint arXiv:2410.17809, 2024.
 - **Z. You**, J. Gu, Z. Li, X. Cai, K. Zhu, C. Dong, T. Xue, “Descriptive Image Quality Assessment in the Wild,” arXiv preprint arXiv:2405.18842, 2024.
- **Conference**
 - X. Cai, **Z. You**, H. Zhang, W. Liu, J. Gu, T. Xue, “PhoCoLens: Photorealistic and Consistent Reconstruction in Lensless Imaging,” in Proc. of the Annual Conference on Neural Information Processing Systems (NeurIPS, Spotlight), 2024.

- **Z. You**, Z. Li, J. Gu, Z. Yin, T. Xue, C. Dong, “Depicting Beyond Scores: Advancing Image Quality Assessment through Multi-modal Language Models,” in Proc. of European Conference on Computer Vision (ECCV), 2024.
- **Z. You**, K. Yang, W. Luo, X. Lu, L. Cui, X. Le, “Few-Shot Object Counting with Similarity-Aware Feature Enhancement,” in Proc. of the IEEE Winter Conference on Applications of Computer Vision (WACV, Early Accept), 2023.
- **Z. You**, L. Cui, Y. Shen, K. Yang, X. Lu, Y. Zheng, X. Le, “A Unified Model for Multi-class Anomaly Detection,” in Proc. of the Annual Conference on Neural Information Processing Systems (NeurIPS, Spotlight), 2022.
- **Z. You**, K. Yang, W. Luo, L. Cui, Y. Zheng, X. Le, “ADTR: Anomaly Detection Transformer with Feature Reconstruction,” in Proc. of International Conference on Neural Information Processing (ICONIP, Oral), 2022.
- **Journal**
 - J. Liu, Y. Zhang, C. Li, **Z. You**, Z. Zhou, C. Yang, Y. Yang, Y. Liu, W. Ouyang, “MaskMA: Towards Zero-Shot Multi-Agent Decision Making with Mask-Based Collaborative Learning,” Transactions on Machine Learning Research (TMLR), 2024.
 - **Z. You**, J. Li, H. Zhang, B. Yang, X. Le, “An Accurate Star Identification Approach Based on Spectral Graph Matching for Attitude Measurement of Spacecraft,” Complex & Intelligent Systems, 8(2), pp.1639-1652, 2022.
 - L. Chen, **Z. You**, N. Zhang, J. Xi, X. Le, “UTRAD: Anomaly Detection and Localization with U-Transformer,” Neural Networks, 147, pp.53-62, 2022.

Services

- **Journal Reviewer**
 - International Journal of Computer Vision (IJCV)
 - IEEE Transactions on Neural Networks and Learning Systems (T-NNLS)
 - IEEE Transactions on Systems, Man and Cybernetics: Systems (T-SMCS)
 - IEEE Transactions on Multimedia (T-MM)
 - IEEE Transactions on Circuits and Systems for Video Technology (T-CSVT)
 - Pattern Recognition (PR)
 - Knowledge Based Systems (KBS)
 - Journal of Intelligent Manufacturing
 - Neurocomputing
- **Conference Reviewer**
 - IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2024, 2025
 - Annual Conference on Neural Information Processing Systems (NeurIPS), 2024
 - International Conference on Learning Representations (ICLR), 2025
 - International Conference on Artificial Intelligence and Statistics (AISTATS), 2025

Honors and Awards

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| • Excellent Master Dissertation | 2023 |
| • Outstanding Graduate (Postgraduate) | 2023 |
| • National Scholarship | 2022 |
| • Outstanding Graduate (Undergraduate) | 2020 |

- ABB Scholarship 2017, 2018, 2019
- Tingya Scholarship 2019

Teaching

- **Teaching Assistant, The Chinese University of Hong Kong** Sept. 2024 - Dec. 2024
 - Course: IERG4230, Introduction to Internet of Things.
- **Teaching Assistant, The Chinese University of Hong Kong** Sept. 2024 - Dec. 2024
 - Course: IERG2051, Signals and Systems.
- **Teaching Assistant, The Chinese University of Hong Kong** Jan. 2024 - May. 2024
 - Course: IERG4160, Image and Video Processing.
- **Teaching Assistant, The Chinese University of Hong Kong** Sept. 2023 - Dec. 2023
 - Course: ENGG2720, Complex Variables for Engineers.
- **Teaching Assistant, Shanghai Jiao Tong University** Sept. 2020 - Jan. 2021
 - Course: ME28009, Dynamic Programming and Optimal Control.

Miscellaneous

- Languages Mandarin (First Language), English (TOEFL 101)
- Hobbies Technical Writing, Reading, Geography, Running, Table Tennis
- Activities Founder & President of *SJTU Lingduzhe Association*
 Leader of Media Team in *SJTU International Office* and *SJTU Youth League Committee*
 Monitor of Postgraduate Class