

# ZHIYUAN YOU

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## Education

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- **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: 3.78/4.0, Ranking: 5/148
  - Supervisor: Professor Xinyi Le
  - Summer Exchange to *Columbia University* in 2018

## Working Experience

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- **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.

## Teaching

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- **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.

## Publications

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- **Preprint**

- **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**
  - **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, Oral), 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**
  - **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

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- **Journal Reviewer**
  - International Journal of Computer Vision (IJCV)
  - IEEE Transactions on Neural Networks and Learning Systems (T-NNLS)
  - IEEE Transactions on Circuits and Systems for Video Technology (T-CSVT)
  - Pattern Recognition (PR)
  - Knowledge Based Systems (KBS)
  - Neurocomputing
- **Conference Reviewer**
  - IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2024
  - Annual Conference on Neural Information Processing Systems (NeurIPS), 2024

## 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             |

## Miscellaneous

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- Languages Mandarin (First Language), English (TOEFL 101)

- Hobbies
- Activities

Technical Writing, Reading, Geography, Running, Table Tennis

Founder & President of *SJTU Lingduzhe Association*

Leader of Media Team in *SJTU International Office* and *SJTU Youth League Committee*

Monitor of Postgraduate Class