

# JIANQI CHEN

Beihang University, Beijing (updated to 2024.02.11)

[Home Page](#) [WindVChen](#) [Scholar](#) [ORCID](#) [✉ windvchen@gmail.com](mailto:windvchen@gmail.com)

## RESEARCH INTERESTS

---

4D (Human Motion) Generation, Adversarial Attack and Defense, Text-to-Image Synthesis, Image Recognition

## EDUCATION

---

### Master in Beihang University

Sep 2021 – Jan 2024

*Pattern Recognition and Intelligent Systems, GPA: 3.86/4.0, Ranking: (1/140)*

### Bachelor in Beihang University

Sep 2017 – Jun 2021

*Control Science and Engineering, GPA: 3.78/4.0, Ranking: (3/83)*

## SELECTED PUBLICATIONS

---

### Diffusion Models for Imperceptible and Transferable Adversarial Attack [\[Paper\]](#) [\[Github\]](#)

*ArXiv, 2023*

Jianqi Chen, Hao Chen, Keyan Chen, Yilan Zhang, Zhengxia Zou, and Zhenwei Shi

### Zero-Shot Image Harmonization with Generative Model Prior [\[Paper\]](#) [\[Github\]](#)

*ArXiv, 2023*

Jianqi Chen, Zhengxia Zou, Yilan Zhang, Keyan Chen, and Zhenwei Shi

### Prototypical Information Bottlenecking and Disentangling for Multimodal Cancer Survival Prediction

*Accepted (Spotlight), International Conference on Learning Representations (ICLR), 2024 [\[Paper\]](#)*

Yilan Zhang, Yingxue Xu, Jianqi Chen, Fengying Xie, Hao Chen

### Dense Pixel-to-Pixel Harmonization via Continuous Image Representation [\[Paper\]](#) [\[Github\]](#) [\[Demo\]](#)

*Published, IEEE Transactions on Circuits and Systems for Video Technology (TCSVT), 2023*

Jianqi Chen, Yilan Zhang, Zhengxia Zou, Keyan Chen, and Zhenwei Shi

### Contrastive Learning for Fine-grained Ship Classification in Remote Sensing Images [\[Paper\]](#) [\[Github\]](#)

*Published, IEEE Transactions on Geoscience and Remote Sensing (TGRS), 2022*

Jianqi Chen, Keyan Chen, Hao Chen, Wenyuan Li, Zhengxia Zou, and Zhenwei Shi

### A Degraded Reconstruction Enhancement-based Method for Tiny Ship Detection in Remote Sensing Images with A New Large-scale Dataset [\[Paper\]](#) [\[Github\]](#) [\[Dataset\]](#)

*Published, IEEE Transactions on Geoscience and Remote Sensing (TGRS), 2022*

Jianqi Chen, Keyan Chen, Hao Chen, Zhengxia Zou, and Zhenwei Shi

## PROJECTS & RESEARCH

---

### Research on 4D (Human Motion) Generation

Nov 2023 – Present

*Remote Research Intern – Pytorch*

*HUAWEI NOAH'S ARK LAB & MBZUAI*

- Research on generating human motions within a 3D indoor scene. Develop a natural and versatile 4D generation method, based on the knowledge of technologies including human representation, 3D scene representation, reinforcement learning, and conditional generative models.

### Research on Adversarial Attack and Defense

Mar 2022 – Dec 2023

*Research – Core Member – Pytorch*

*LEVIR Group*

- For the attack, explore imperceptible adversarial samples, and black-box transferable adversarial attack. Proposed a strong and powerful imperceptible and transferable attack based on Diffusion Models. [\[Link\]](#)
- For the defense, explore adversarial training and defensive structure design. In CVPR 2022 The Art of Robustness Challenge, won the 5th place in Track I (Classification Task Defense), and the 6th place in Track II (Open Set Defense). [\[Link\]](#)

## Research on Clothes Virtual Try-On

May 2023 – Aug 2023

Research Intern – Pytorch

SenseTime Research

- Work on fashion clothes try-on. Develop robust and high-quality fashion clothes try-on methods, based on the knowledge of technologies like text-to-image synthesis, image inpainting, large vision models, and fine-tuning strategy.

## Research on High Resolution Harmonization and Zero-Shot Harmonization

Jun 2022 – July 2023

Personal Research – Pytorch

LEVIR Group

- Leveraged Implicit Neural Representation to meet the needs of ultra-high resolution image harmonization for real-world scenarios ( $\geq 6K$  resolution). [\[Link\]](#)
- Proposed a zero-shot image harmonization algorithm based on Diffusion Models, aiming at the problem that the current methods have a heavy demand for large datasets. [\[Link\]](#)

## Gaofen Series Satellite Data Processing Software

Apr 2021 – Jun 2023

Project – Core Member – C++ & Linux

LEVIR Group

- Built a data processing software system with C++ to ensure that the memory usage and data processing speed meet the requirements.
- Participated in the whole process of code construction, system testing, module joint debugging, and logistics support as the core member in charge of an 8-people team.

## Remote Sensing Tiny Target Rapid Processing System

Oct 2020 – Nov 2021

Project – Algorithm Design – Pytorch & Docker & TensorRT

LEVIR Group

- Proposed a degraded reconstruction enhanced network for real-time ship detection in low-resolution wide-range remote sensing images. For objects  $\leq 20 \times 20$  pixels, compared with existing methods, the accuracy (AP) is increased by 4.7 while the parameters (Params) and calculation amount (FLOPs) are reduced by 32% and 19% respectively. [\[Link\]](#)
- Proposed an asynchronous contrastive learning algorithm for fine-grained classification of ships. By separating and aggregating features, the classification accuracy reaches SOTA on more than 20 important fine-grained classes. [\[Link\]](#)

## SELECTED HONORS

---

|   |          |
|---|----------|
| Outstanding Graduates of Beijing Municipality   | Jan 2024 |
| ”Postgraduate Excellent Academic Innovation Achievement Award” of Beihang University            | Jun 2023 |
| National Scholarship, Ministry of Education of China  | Sep 2022 |
| Graduate Entrance Scholarship of Beihang University   | Sep 2021 |
| Outstanding Graduates of Beihang University   | Jun 2021 |
| First Prize of “Innovation and Entrepreneurship Scholarship”                                    | Dec 2020 |
| Special Prize of “Outstanding Academic Performance”, Beihang University                         | Dec 2020 |
| First Prize of “Lee Kum Kee Astronautics Scholarship”, Beihang University                       | Nov 2020 |
| Second Prize in China College Students’ “Internet+” Innovation and Entrepreneurship Competition | Sep 2020 |

## SKILLS

---

**Programming Language:** Python, C++, Matlab, HTML/CSS, etc

**Language:** Mandarin (*native*), English (*IELTS 7.5*), German (*beginner*)

## EXTRACURRICULAR

---

### Media Design Department of the College News Center

Deputy Director – Responsible for the publicity work of the college

Nov 2018 – Jun 2020

Beihang University

### Chung Yuan Christian University Summer Camp

Visiting Student – Took a Microcomputer Creation Course and learnt local culture

Jul 2019 – Aug 2019

Chung Yuan Christian University