

Zekun Qi

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🌐 Current research directions include 3D computer vision, multimodal large language models, and embodied AI.



Education

- 2022 – 📖 **M.S. Xi'an Jiaotong University & IIS, Tsinghua University** *Software Engineering*
Supervised by Prof. [Andrew C. Yao](#) and Prof. [Kaisheng Ma](#), while also collaborating closely with Prof. [Li Yi](#). Our group's homepage is [ArchipLab](#).
- 2018 – 2022 📖 **B.S. Xi'an Jiaotong University** *Automation*
Ranked in the top 10% academic performance. Achieved a **first-class** university scholarship and honored as an outstanding graduate.

Employment History

- 2023.7 – 📖 **MEGVII Inc.** *Research Intern*
Multi-modal Large Language Model structure design and data filtering.
- 2021.6 – 2022.2 📖 **ByteDance Inc.** *Engineer Intern*
Build a performance monitoring platform using Selenium. Use SIFT and KNN algorithms to achieve online front-end comparison. Construct the Lark service bot.

Research Publications

Conference Proceedings

- 1 R. Dong, [Z. Qi](#), L. Zhang, J. Zhang, *et al.*, “**Autoencoders as Cross-Modal Teachers: Can Pretrained 2D Image Transformers Help 3D Representation Learning?**” In *ICLR, 2023*. 🌐 URL: <https://openreview.net/forum?id=80un8ZUve8N>.
- 2 [Z. Qi](#), R. Dong, G. Fan, Z. Ge, *et al.*, “**Contrast with Reconstruct: Contrastive 3D Representation Learning Guided by Generative Pretraining**,” in *ICML, 2023*. 🌐 URL: <https://arxiv.org/abs/2302.02318>.
- 3 [Z. Qi](#), M. Yu, R. Dong, and K. Ma, “**VPP: Efficient Universal 3D Generation via Voxel-Point Progressive Representation**,” in *NeurIPS, 2023*. 🌐 URL: <https://openreview.net/forum?id=etd0ebzGOG>.
- 4 R. Dong, C. Han, Y. Peng, [Z. Qi](#), *et al.*, “**DreamLLM: Synergistic multimodal comprehension and creation**,” in *ICLR, 2024*. 🌐 URL: <https://openreview.net/forum?id=y01KGvd9Bw>.

Preprint Articles

- 1 G. Fan, [Z. Qi](#), W. Shi, and K. Ma, “**Point-GCC: Universal Self-supervised 3D Scene Pre-training via Geometry-Color Contrast**,” *arXiv preprint*, 2023. 🌐 URL: <https://arxiv.org/abs/2305.19623>.
- 2 [Z. Qi](#), R. Dong, S. Zhang, H. Geng, *et al.*, “**ShapeLLM: Universal 3D Object Understanding for Embodied Interaction**,” *arXiv preprint*, 2024. 🌐 URL: <https://arxiv.org/abs/2402.17766>.

Skills

- Languages **📖** reading, writing and speaking competencies for English and Chinese.
- Coding **📖** **Python**, C, C++, Matlab, \LaTeX , ...
- Library **📖** **PyTorch**, Numpy, Pandas, OpenCV, sklearn...
- Misc. **📖** **ChatGPT**, Linux, **DataBase** (SQL, MongoDB), **Data Mining** (Beautiful Soup, Selenium), Embedded system (Keil-ARM, C51), Android Development, PhotoShop, Blender, ...

Miscellaneous Experience

Awards and Achievements

- 2020 **📖** **National Special Prize for China Undergraduate Physics Tournament**
Won the **national runner-up** of the China Undergraduate Physics Tournament (CUPT) as the team leader. [Commendation Website](#). The **paper** is published in the core journal *Physics and Engineering*.
- 📖** **Provincial First Prize for China Undergraduate Mathematical Contest in Modeling**
Based on graph theory and reinforcement learning to model and analyze desert gold-digging games, the **paper** is published in the core journal *China Collective Economy*.
- 2021 **📖** **National Excellence Award for Undergraduate Innovation & Entrepreneurship Projects**
Regional intrusion and abnormal behavior detection, utilizing frame differencing for motion region detection and segmentation, mean shift algorithm for object tracking, and YOLO for object recognition.
- 📖** **Annual Spiritual Civilization Award in Xi'an Jiaotong University**
Won the Innovation and Entrepreneurship Award, which is granted to only **ten** individuals each year. [Commendation Website](#).