Jiantong Zhao

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Personal Profile

AI Researcher with a proven track record of making well-informed and impartial decisions on intricate real-world challenges. Proficient in effectively communicating complex concepts, ideas, and findings through both oral presentations and technical reports. Possesses a global perspective and an innovative mindset.

Education

2023 - Present: Mohamed bin Zayed University of Artificial Intelligence, Abu Dhabi, UAE

Master of Science in Computer Vision
Full sponsorship, due to graduate in May 2025

Skills, knowledge, and competencies include:

- **Proficient in computer vision**: Demonstrate expertise in computer vision, leveraging mathematical and computational principles to develop cutting-edge solutions;
- **Multidisciplinary integration**: Innovatively integrates knowledge from diverse fields to generate novel ideas;
- **Advanced problem-solving**: Applies advanced problem-solving skills to analyze, design, and execute solutions for existing and new challenges in computer vision and other AI domains;
- **Project management**: Successfully initiates, manages, and completes multifaceted AI projects;
- **Adaptability**: Thrives both independently and as a team member in addressing research or development problems under complex and unpredictable real-world conditions;
- **Ethical awareness**: Recognizes the legal, ethical, environmental, and socio-cultural implications of AI technologies.

Key subject areas:

- Human and Computer Vision
- Visual Object Recognition and Detection
- Advanced Natural Language Processing
- Advanced 3D Computer Vision
- Probabilistic and Statistical Inference
- Advanced Machine Learning

2019 - 2023: Tsinghua University, Beijing, China

Department of Automation
Bachelor of Engineering

Key subject areas:

- Calculus
- Programming Languages
- Computer Architecture
- Principles of Automatic Control
- Probability & Statistics
- Data Structures & Algorithms
- Computer Networks
- Linear Algebra

Specialization in Intelligent Systems:

- Pattern Recognition and Machine Learning
- Fundamentals of Artificial Intelligence
- Robotics and Artificial Intelligence
- Deep Learning

Internship Experience

2022 (Semester 6): Washington University, Seattle, USA

10 Months Summer Research in the Theme of AIGC Directed by Associate Prof. Sheng Wang

- Combined VAE with transformer for image serialization representation.
- Finished prediction and generation of mouse gene expression images under zero/few-shot.

Research Projects

2021 Summer: Tsinghua University, Beijing, China

3 Months Undergraduate Research Project Directed by Associate Prof. Jiwen Lu

- Designed and implemented an image super-resolution deep network.
- Optimized the implement of look-up table and tetrahedral interpolation to lightweight and speed up for deployment.

2023 – Present: Mohamed bin Zayed University of Artificial Intelligence, Abu Dhabi, UAE

Long-Term Research Supervised by Associate Prof. Hao Li
- A Member of the Metaverse Lab
- Reconstruct a moving texture-poor or transparent object using video from a monocular camera.
- Implement bundle adjustment by cuda for pose and model joint optimization in 3d gaussian splatting.

Skills and Competencies

Pytorch, Tensorflow, Python, C, C++, Java, MATLAB

Slam, Structure from Motion, Pose Estimation, Common Generative Model (Diffusion, GAN, VAE, VQ-VAE, Transformer)

Languages: English & Mandarin

Achievements

2020 - 2022 Director of the Training and Learning Sector of the Department of Automation, Tsinghua University

2019 Won the second prize in Tsinghua Smart Car Design Competition 'Dynamic chip' Program.

Interests

- Novel View Synthesis
- 3D Reconstruction
- AI-Generated Content
- Digital Avatar
- Multi-Modal Machine Learning

References

Hao Li
Supervisor
Mohamed bin Zayed University of Artificial Intelligence
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Kun Zhang
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