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

**2019 - 2023: Tsinghua University, Beijing, China**

Department of Automation

Bachelor of Engineering

Key subject areas:

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

Specialization in Intelligent Systems:

* Pattern Recognition and Machine Learning • Robotics and Artificial Intelligence
* Fundamentals of 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

Supervisor

Carnegie Mellon University & Mohamed bin Zayed University of Artificial Intelligence

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