

Qiming Li

Associate Professor

Quanzhou Institute of Equipment Manufacturing,
Haixi Institute, Chinese Academy of Sciences

Email: qimingli@fjirsm.ac.cn

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To the Admissions Committee

Re: Recommendation for Mr. Shizhao Gao

Dear Members of the Admissions Committee,

I am pleased to recommend Mr. Shizhao Gao for doctoral study in computer vision, multimodal learning, and related areas. I am an Associate Professor at the Quanzhou Institute of Equipment Manufacturing, Haixi Institute, Chinese Academy of Sciences. Since September 2024, I have served as his day-to-day research supervisor during his M.Eng. training under our joint arrangement with Fujian Agriculture and Forestry University. I meet with him regularly to review research plans, code, experiments, and manuscripts, and I serve as the corresponding author on all of his current research papers. This close involvement allows me to assess both his research ability and his engineering practice. Because much of our joint work concerns efficient video analysis and deployable systems, I have also seen how he moves from an idea to software that others can test and use.

Shizhao combines research initiative with sound engineering judgement. In Nano-TCC, he led the implementation and deployment of a resource-aware repetition-sensing pipeline for mobile and edge devices. He integrated data processing, model export, inference, and deployment validation, while using profiling results to balance recognition performance with computational and memory constraints. He checked consistency between training and deployment, traced errors through preprocessing and model-export stages, and repeated timing and resource measurements before drawing conclusions. When deployment exposed limitations, he revised the pipeline rather than treating desktop performance as sufficient evidence. I followed these iterations closely and saw that he could connect model design with the requirements of a functioning system.

He has also developed reusable action-analysis software for video and skeleton preprocessing, repetition counting, batch inference, evaluation, and result visualisation. These components gave our group a consistent way to compare methods, inspect failure cases, and reproduce experiments. He maintained clear interfaces and configurations as the projects evolved. For his CVPR project, he independently implemented the complete PyTorch pipeline and conducted the main experiments and ablations. The resulting first-author paper appeared in CVPR 2026 Findings and received a CVPR Compute Gold Star. In a later VideoLLM study, he organised model adapters, evaluation scripts, and cross-model tests, and reported clearly when an efficiency strategy did not transfer between architectures.

Shizhao is reliable in collaborative work. He communicates technical problems early, responds constructively to code and experiment reviews, and prepares results so that others can inspect them. He has helped interns organise research code and experimental reports, supported undergraduate projects, and assisted with shared GPU servers, software environments, and computing-resource allocation. He is willing to resolve infrastructure issues that affect the wider group, even when they are not part of his own immediate experiments.

Based on my close supervision, I believe Shizhao is ready for the independence, persistence, and collaboration required in doctoral study. Across these projects, he has demonstrated the full cycle of problem definition, implementation, deployment, evaluation, and revision. He can build a complete solution and improve it through critical discussion and evidence. I recommend him without reservation and am confident that he will contribute productively to the research group he joins. Please feel free to contact me if further information would be helpful.

Sincerely,

Qiming Li

Associate Professor

Quanzhou Institute of Equipment Manufacturing,

Haixi Institute, Chinese Academy of Sciences

Institutional email: qimingli@fjirsm.ac.cn