

# Jun Luo

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## EDUCATION

### Peking University

Sep 2022 - Jul 2026

Applied Physics, Bachelor, School of Physics

Beijing

double degree in Computer Science at School of Electronics Engineering and Computer Science, Peking University

GPA:3.77/4.00 rank:15~20%

Linear Algebra (B) 94; Probability theory and statistics in information science 92;

Advanced Mathematics A (no. 1) 95; Advanced Mathematics A (no. 2) 92;

Operating System 92; Reinforcement Learning 95;

## HONORS & AWARDS

38th Chinese Physics Olympiad National Second Prize (Silver Medal)

2021.11

Third class scholarship of Peking University

2023, 2024

Peking University School of Physics scholarship for physics students

2023.05

Peking University School of Physics Study Excellence Award

2023, 2024

## PROJECTS

### Quantization Compression of Large Language Models

April 2024 - July 2024

- Applied PQ (Product Quantization) algorithm to compress the weights of large language models.
- The compressed LLaMA2-7B model demonstrated superior performance on the WikiText-2 and C4 datasets compared to the baseline GPTQ algorithm.

### Domain Adaptation

July 2024 - January 2025

- Background : Deep learning models perform well on training data but often struggle with significant performance drops on different test datasets. Unsupervised Domain Adaptation (UDA) aims to improve performance on an unlabeled target domain by leveraging labeled source domain data.
- Initial Exploration : Built upon the group's foundational work MRT (ICCV 2023) by designing a dual-student strategy to enhance adaptation capabilities.
- Mid-stage : Proposed utilizing the generative power of layout-to-image diffusion models to tackle the challenges of no annotations in the target domain and class imbalance issues.
- Later Stage : Transitioned to the zero-shot semantic segmentation setting, following prior works. Leveraged image editing models to propose a random cropping strategy for constructing a intermediate domain, enabling a progressive adaptation approach from the source domain to the synthetic target domain. Achieved SOTA results across 5 datasets.
- Output : **First-author** paper titled **Zero Shot Domain Adaptive Semantic Segmentation by Synthetic Data Generation and Progressive Adaptation**, currently under review for IROS 2025.

## SKILLS

Languages: Chinese, English(CET-6: 590)

Python, C, C++

Linux

Pytorch

Fundamentals and frontiers of Deep Learning: ResNet, Transformer, Faster R-CNN, YOLO, DETR, ViT, SAM...

Generative models: diffusion/flow matching, Stable Diffusion, ControlNet, DDIM, DreamBooth...

LLM/MLLM: BERT, Llama, DeepSeek-R1/ CLIP, Qwen-VL2

Machine Learning, Reinforcement Learning

Openmp, MPI, CUDA