Muyang Li

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Education

Carnegie Mellon University Aug. 2021 – Present

Master of Science in Robotics Pittsburgh, USA

- Advised by Prof. Jun-Yan Zhu
- Quality Point Average (QPA): 4.08/4.33

Shanghai Jiao Tong University Sep. 2016 – Jun. 2020

Bachelor of Engineering in Computer Science Shanghai, China

- Member of ACM Class, an elite CS program for the top 5% talented students.
- GPA: 89.9/100 3.85/4.3

Research Interests

My research interest is in the intersection of machine learning, system, and computer graphics.
I am currently working on building efficient and hardware-friendly generative models with its applications in computer vision and graphics.

Publications

[1] **Muyang Li**, Ji Lin, Chenlin Meng, Stefano Ermon, Song Han and Jun-Yan Zhu, *Efficient Spatially Sparse Inference for Conditional GANs and Diffusion Models* (**NeurIPS 2022**)

[2] Yihan Wang, **Muyang Li**, Han Cai, Wei-Ming Chen and Song Han, *Lite Pose: Efficient Architecture Design for 2D Human Pose Estimation* (**CVPR 2022**)

[3] **Muyang Li**, Ji Lin, Yaoyao Ding, Zhijian Liu, Jun-Yan Zhu, and Song Han, *GAN Compression: Efficient Architectures for Interactive Conditional GANs* (**CVPR 2020 & T-PAMI**)

Experiences

OmniML Inc. Jul. 2019 – Jan. 2020

Summer Intern Work with Prof. Song Han San Jose, USA

Efficient vision model deployment on edge devices.

CMU Generative Intelligence Lab Jul. 2019 – Jan. 2020

Master Student Advisor: Prof. Song Han and Prof. Jun-Yan Zhu Pittsburgh, USA

Work on efficient generative models.

Dawnlight Inc. Jul. 2020 – Present

Data Scientist Work with Prof. Song Han and Prof. Jia Li Shanghai, China

Lite Pose: Efficient Architecture Design for 2D Human Pose Estimation

- Design a light-weighted 2D pose estimation backbone.
- Deploy the model on Jetson Nano and Raspberry Pi with TVM.
- **Accepted by CVPR2022.**

Applications of Computer Vision on Health Care

- Use skeleton-based action recognition model for the health care of the diabetics.
- Integrate **human-object interaction** in the skeleton-based action recognition model.
- Deploy the recognition model for production and prepare a demo.

MIT HAN Lab Jul. 2019 – Jan. 2020

Research Assistant Advisor: Prof. Song Han and Prof. Jun-Yan Zhu Massachusetts, USA

GAN Compression: Efficient Architectures for Interactive Conditional GANs

- Design a **general** framework to compress the conditional GANs.
- Achieve **ultra-high compression rate** without losing performance.
- Build a **real-time demo** for our proposed algorithm.
- **Accepted by CVPR2020 and T-PAMI.**

Teaching

SJTU ACM Coach Jun. 2018 – Apr. 2019

Coach of ACM Teams Manager: Prof. Yong Yu

SJTU Data Structure (CS147) Mar. 2018 – May. 2018

Teaching Assistant Manager: Prof. Huiyu Weng

Highlighted Projects

Lite-Pose Mar. 2021 – Jun. 2022

mit-han-lab/litepose

Python A light-weighted pose estimation model that could run on mobile devices.

GAN Compression Jul. 2019 – Apr. 2020

mit-han-lab/gan-compression

Python A general conditional GAN Compression framework.

OS-Kernel Apr. 2018 – Jul. 2018

lmxyy/OS-Kernel

NASM, C An OS-Kernel from scratch developed by myself.

Mx* Compiler Mar. 2018 – Jun. 2018

lmxyy/Mx_star-Compiler

Java, NASM A Java-and-C-like language compiler from scratch developed by myself.

RISCV32 CPU Dec. 2017 – Jan. 2018

lmxyy/RISCV-CPU

Verilog, RISCV A RISC-V CPU from scratch developed by myself.

Honors and Awards

Gold Medal, Award on CCPC2017 Harbin Regional, Ranked 10th Oct. 2017
Gold Medal, Award on ICPC2017 Qingdao Regional, Ranked 5th Nov. 2017
3rd Runner-up, Award on ICPC2017 Jakarta Regional Nov. 2017
1st Runner-up, Award on Singing Competition of Zhiyuan College in SJTU Dec. 2017
Jin Long Yu Fellowship, Award for top 1% students Dec. 2017
Huawei Scholarship, Award for top 20% students Dec. 2018
1st Runner up's Coach, Award on ICPC2018 Pathom Regional Nov. 2018
A-Class School-level Scholarship, Award for top 1% students Dec. 2018
Zhiyuan Honorary Scholarship (3 times), Award for top 5% students 2016, 2017, 2018
Honorable Mention, Award for 2019 American Interdisciplinary Contest in Modeling (ICM) Jan. 2019

Skills

Programming Languages: C++/C = Python > Java
Deep Learning Packages: PyTorch, TensorFlow
Languages: English - Proficient, Mandarin - Native speaker, Japanese - Amateur
Other: Pop Singing