YUDA FAN

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EDUCATION

Shanghai Jiao Tong University *Sep. 2016 - Jun. 2020*
Bachelor of Engineering in Computer Science
GPA: 3.92/4.30, 90.3/100 (Rank 6/38)

ACM Honor Class is an elite CS program for top 5% students at SJTU

ETH Zürich *Aug. 2021 -*
Ph.D. in Computer Science

· Direct Doctorate Program in Computer Science

RESEARCH EXPERIENCE

MVIG, Shanghai Jiao Tong University Jul. 2018 - Jun. 2020
Research Assistant to Prof. Cewu Lu *Shanghai, China*

· **CyberPanda: A Universal Robotic Arm Simulator Towards Photorealistic Visual Perception**: Propose a novel universal robotic arm simulator with photorealistic visual feedback.
Integrate the remote procedure call system, rendering pipeline and physics engine in the platform.
Empower users to construct scene, collect data and conduct simulation. *Undergraduate Thesis*

· **3D Real Embodied Dataset and Transferable Active Grasping**: Proposed a large-scale dataset in cluttered scenes for grasping task. Adopted a novel reinforcement learning algorithm and 3D vision architectures to conduct viewpoint optimization. *ICRA 2020*

Meituan - Sankuai Technology Co., Ltd. Jul. 2020 - Feb. 2021
Research Assistant to Prof. Junchi Yan *Beijing, China*

· **AutoVision**: A platform to automatically conduct neural architecture search, model compression and hyperparamters optimization.

· **Memory-Efficient Neural Architecture Search**: Propose a training scheme to eliminate the performance collapse in memory-efficient fashion. Paper submitted to CVPR 2021. *Awarded with the core patent of the highest level in 2020 Q4.*

Institute for Advanced Study Feb. 2021 - Present
Research Assistant to Dr. Zhao Song *Princeton, New Jersey*

· **Sparse Linear System Solver**: Adopt block Krylov method via recursive low displacement rank factorizations to get a faster linear system solver than matrix multiplication.

PUBLICATIONS

Xiangyu Chen*, Zelin Ye*, Jiankai Sun, **Yuda Fan**, Fang Hu, Chenxi Wang, and Cewu Lu, *Transferable Active Grasping and Real Embodied Dataset*, *ICRA 2020*.

Xiaoxing Wang*, Xiangxiang Chu*, **Yuda Fan**, Zhexi Zhang, Xiaolin Wei, Junchi Yan and Xiaokang Yang, *ROME: Robustifying Memory-Efficient NAS via Topology Disentanglement and Gradients Accumulation*, *arxiv preprint*.

SELECTED INTERESTING PROJECTS

CS492: Reinforcement Learning Jun. 2019
Prof. Zhihua Zhang *Shanghai, China*

- **Fight with Landlord**: Combine hand decomposition module and Hierarchy Reinforcement Learning to learn the subgoals of card games.
- 95/100, Rank:2/67.

MS208: Compiler Design and Implementation Jun. 2018
Dr. Rong Ma *Shanghai, China*

- **Mx* Compiler**: Designed a compiler implemented in Java from scratch, translating **Mx*** code into x64-nasm code.
- Implemented optimizations for the compiler, faster than gcc O1 on test set.
- 97/100, Rank: 4/41.

MS110: Operating System Jun. 2018
Prof. Alei Liang *Shanghai, China*

- NachOS: Implemented the kernel of a UNIX operating system, including threads, file system, network, virtual memory, etc.
- 96/100, Rank: 8/41.

AWARDS & HONORS & NOMINATION

Outstanding Graduate of Shanghai Jiao Tong University *Jul. 2020, SJTU*

2016-2018 The First Prize Scholarship: Top 5% of Shanghai Jiao Tong University

Problem Setter of CCF NOI 2019 *Jun. 2019*

Problem Setter of CCPC 2018 Jilin Regional Contest *Sep. 2018*

2017 Rong Chang Scholarship: Top 0.02% of Shanghai Jiao Tong University *Oct. 2017, SJTU*

1st Runner Up, ACM-ICPC 2017-2018 Hua-Lien Regional Contest *Nov. 2017, Taiwan*

Gold Medal 19th place, ACM-ICPC 2017-2018 Asia ECL Final *Dec. 2017, Shanghai*

Gold Medal 6th place, ACM-ICPC 2017-2018 Xi'an Regional Contest *Oct. 2017, Xi'an*

Gold Medal 9th place, ACMICPC 2016-2017 Myanmar Regional Contest *Dec. 2016*

Gold Medal 9th place, CCPC 2017 Hangzhou Regional Contest *Nov. 2017*

Gold Medal 7th place, ACM-ICPC 2016-2017 Xi'an Invitation Contest *May. 2017*

TEACHING EXPERIENCE

Teaching Assistance **CS477 Combinatorics (Spring 2020)**

PROFICIENT PROGRAMMING SKILLS

C++, C#, Python, Java, Lua