

Yuda Fan

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Preferred Interview Language: C++

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EDUCATION

- **ETH Zürich** Zürich, Switzerland
Double enrolled in Direct Doctorate Program and M.Sc. in Computer Science Sep. 2021 - May. 2024
- **Shanghai Jiao Tong University** Shanghai, China
B.Eng. in Computer Science, ACM Honor Class; GPA: 90.2/100, Summa cum laude Sep. 2016 - Jun. 2020

EXPERIENCE

- **Theory Lab, Huawei Hong Kong Research Center** Hong Kong, China
Senior Engineer in Information Theory Group Nov. 2024 - Present
 - **Omni-Infer**: An LLM inference architecture enhancement backed by vLLM and SGLang. Design and implement the following features: **Multi-Token Speculative Decoding, Rejection Sampling, NPU Accelerated Sampler, MultiStep**. Decrease TPOT by more than 50%. *Technical Report*
 - **Gauss DataBase**: Improve CPU vector search with intrinsic and assembly instructions on Armv8-A Neon chip. Design and implement the heterogeneous batch vector search scheme on HiSilicon Kirin chipset.
 - **Skills**: LLM Infrastructure, vLLM, C, Ascend C, Assembly, Triton
- **CADMO, ETH Zürich** Zürich, Switzerland
Ph.D. Researcher in Prof. Emo Welzl's Group Oct. 2022 - Apr. 2024
 - **Hidden Points and Hidden Vertices**: Prove that the hidden point problem is in $\exists\mathbb{R}$. Introduce novel techniques such as convex/reflex chains and continuous visibility graph, and find PTAS and efficient algorithms for spiral polygons, funnel polygons, pseudo-triangles, fan-shaped polygons, and staircase polygons. *Master's Thesis*
 - **Skills**: Graph Theory, Computational Geometry, Combinatorics, Scientific Writing
- **Vision AI Department, Meituan** Beijing, China
Machine Learning Engineer in Architecture Group Jul. 2020 - Feb. 2021
 - **AutoVision**: A platform to automatically conduct neural architecture search, on-device model compression and hyperparameters optimization based on the MNN framework.
 - **Memory-Efficient Neural Architecture Search**: A training and inference scheme to eliminate the performance collapse in memory-efficient NAS. *Highest level patent in 2020*
 - **Skills**: ML Training, Neural Architecture Search, Pytorch, Swift, iOS Dev
- **MVIG, Shanghai Jiao Tong University** Shanghai, China
Undergraduate Researcher in Prof. Cewu Lu's Group Jul. 2018 - Jun. 2020
 - **CyberPanda**: A novel universal robotic arm simulator with photorealistic visual feedback. Integrate the remote procedure call system, rendering pipeline and the physics engine in the software. *Bachelor's Thesis*
 - **Transferable Active Grasping**: Improve the viewpoint optimization strategy to deal with sparse reward issue. Propose a reliable grasping algorithm with higher success rate. *ICRA 2020*
 - **Skills**: Computer Vision, Robotics, Unreal Engine 4, C#, gRPC

SELECTED HONORS AND AWARDS

- **Outstanding Graduate of Shanghai Jiao Tong University** Jun. 2020
- **Winner, 2025 Huawei Hackathon Software Challenge Final** Oct. 2025
- **Winner, ICPC 2021-2022 Swiss Subregional Contest** Nov. 2021
- **2nd Place, 2025 Huawei Hackathon Software Challenge Preliminary Contest** Aug. 2025
- **2nd Place, ACM-ICPC 2017-2018 Hua-Lien Regional Contest** Nov. 2017
- **6th Place, ACM-ICPC 2017-2018 Xi'an Regional Contest** Oct. 2017