Yuda Fan
https://kurodakanbei.github.io/
Preferred Interview Language: C++

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Education

- **ETH Zürich** — Zürich, Switzerland
  Master of Science in Computer Science; Direct Doctorate Program — *Sep. 2021 - Jun. 2024 (Expected)*
- **Shanghai Jiao Tong University** — Shanghai, China
  Bachelor of Engineering in Computer Science; GPA: 3.92/4.30, 90.3/100 — *Sep. 2016 - Jun. 2020*

Experience

- **CADMO, ETH Zürich** — Zürich, Switzerland
  Researcher in Prof. Emo Welzl's Group — *Oct 2022 - Present*
  - **Unique Sink Orientation**: Study the combinatorial structure of all the USOs of the same cube, and characterize the symmetric difference map between any ordinary USO and the uniform USO. Figure out all the affine transformations under which the USO polytope is a fixed point.
  - **Hidden Points and Hidden Vertices**: Prove that the hidden point problem is in $\exists\mathbb{R}$, and the VC-dimension of visible area set system is bounded by the logarithm of the number of reflex vertices.
    Introduce novel techniques such as convex/reflex chains and continuous visibility graph, and find solutions for spiral polygons, funnel polygons, pseudo-triangles, fan-shaped polygons, and staircase polygons. *Master's Thesis*
  - **Skills**: **Graph Theory, Computational Complexity, Computational Geometry, Scientific Writing**
- **Meituan** — Beijing, China
  Machine Learning Engineer in AI Center — *Jul. 2020 - Feb. 2021*
  - **AutoVision**: A cloud platform to automatically conduct neural architecture search, model compression and hyperparamters 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 core patent in 2020*
  - **Skills**: **Machine Learning, Pytorch, iOS APP Dev, Swift**
- **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 platform. *Bachelor's Thesis*
  - **Transferable Active Grasping**: Improve the viewpoint optimization strategy to deal handle sparse reward issue, resulting in a reliable grasping algorithm with higher success rate. *ICRA 2020*
  - **Skills**: **Computer Vision, Unreal Engine 4, C#, gRPC**

Selected Awards

- **Outstanding Graduate of Shanghai Jiao Tong University** — Jun. 2020
- **The First Prize Scholarship at Shanghai Jiao Tong University** — *2016-2018*
- **2nd Place, ACM-ICPC 2017-2018 Hua-Lien Regional Contest** — Nov. 2017
- **Gold Medal 6th Place, ACM-ICPC 2017-2018 Xi'an Regional Contest** — *Oct. 2017*
- **2nd Place, ACM-ICPC 2021-2022 Swiss Subregional Individual Contest** — Nov. 2021

Selected 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, Junchi Yan, *ROME: Robustifying Memory-Efficient NAS via Topology Disentanglement and Gradients Accumulation*, *ICCV 2023*