Frank Xiang

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Education

Academic Qualifications

- **University of Wisconsin–Madison, (GPA : 4.0/4.0)** — **Madison, US**
  Undergraduate student in Computer Science, — *Jan 2025 - Expected 2026*
- **The Hong Kong Polytechnic University, (GPA : 3.95/4.3)** — **Hong Kong**
  Undergraduate student in Computing and AI, — *Sep 2023 - Dec 2024*
- **HS Affiliated to Renmin University of China** — **Beijing, China**
  High school student, — *Sep 2020 - Jul 2023*

Awards and Scholarship

- HKSAR Government Scholarship 2024/25 (HKD 80,000) — Dec 2024
- Gold Medal Winner (7th Place) in The 2024 ICPC Asia Nanjing Regional Contest — Nov 3, 2024
- Gold Medal (10th Place) of AStar (The 19th Baidu Star Programming Competition) — Dec 2023
- Represented Beijing A Team (3rd) at the 39th National Olympiad in Informatics (NOI 2022) — Aug 2022
- Gold Medal Winner in Byte-Dance Byte Camp 2022 — July 2022
- Gold Medal Winner in the 16th Asia and Pacific Informatics Olympiad (APIO 2022) — May 29, 2022
- 2nd Place in Tsinghua University Programming Contest (THUPC) 2022 — May 2022
- 1st Prize (Gold Medal) of the 39th National Olympiad in Informatics Winter Camp — Jan 28, 2022
- 12th Place of 2021 Huawei ICPC Communication Routing Challenge — Oct 2021
- Silver Medal Winner in the 38th National Olympiad in Informatics (NOI 2021) — July 29, 2021
- Platinum Winner (1st place) in US OPEN of USA Computing Olympiad (USACO) — Apr 2021

Experience

- **LLM / Machine Learning Systems R&D Intern** — **Beijing**
  MiniMax — *Jun 2025 - Aug 2025*

  - Responsible for text services (LLM Serving) based on NVIDIA - FasterTransformer, contributed to MiniMax-M2.
  - Refactored tokenizer service for integration into inference workflows.
  - Enabled expert parallelism (EP) and tensor parallelism (TP) for multi-expert training, and validated legacy models with torchrun.
  - Set up CI automation with GitLab runners on CPU and GPU.

- **Undergraduate Research in Vector Database Management System** — **PolyU, Hong Kong**
  Supervised by Prof. Jieming Shi — *Sep 2024 - Apr 2025*

  - Researched RFANNS problems in vector databases, focusing on HNSW-based graph indexing.
  - Designed a range-filtering nearest neighbor algorithm combining a first-split range strategy and three-segment HNSW structure, achieving significantly better efficiency and accuracy than prior methods across

diverse high-dimensional datasets.

- **SureFire UAV (unmanned aerial vehicle)** **PolyU, Hong Kong**
  Responsible for Computer Vision; Supervised by Prof. Qixin Wang *Nov 2023 - May 2024*

  - Contributed to the SureFire project on smart urban resilience and firefighting, focusing on UAV-based visual perception.
  - Evaluated camera calibration (pinhole, SFM, MVS) and point cloud registration algorithms (ICP, FMR, DGR).

- **Tencent Spark Challenge Week** **Tencent Headquarters, Beijing**
  Computer Vision Direction *Aug 2023*

  - Completed the gesture recognition program through model training (MobileFaceNets, ResNet) and actual testing (Using MediaPipe Landmark by Google) in Python.

Technical and Personal skills

- **Programming Languages:** C++, Python, JavaScript, Java, HTML, CSS
- **Languages:** Chinese, English