

Frank Xiang

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Education

Academic Qualifications.....

- **The Hong Kong Polytechnic University** **Hong Kong**
Undergraduate Student in Computing and AI, *2023 - Present*
- **HS Affiliated to Renmin University of China** **Beijing**
High School Student, *2020 - 2023*

Awards

- Gold Medal (10th Place) of AStar (The 19th Baidu Star Programming Competition) in Dec 2023
- Silver Medal (11th Place) of The 2023 ICPC Asia Macau Regional Contest in Nov 2023
- Represented Beijing A Team (3rd) at the 39th National Olympiad in Informatics (NOI 2022) in Aug, 2022
- Gold Medal Winner in Byte-Dance Byte Camp 2022 in July 2022
- Gold Medal Winner in the 16th Asia and Pacific Informatics Olympiad (APIO 2022) in May 29, 2022
- 2nd Place in Tsinghua University Programming Contest (THUPC) 2022 in May, 2022
- 1st Prize (Gold Medal) of the 39th National Olympiad in Informatics Winter Camp in Jan. 28, 2022
- 12th Place of 2021 Huawei ICPC Communication Routing Challenge in Oct 2021
- Silver Medal Winner in the 38th National Olympiad in Informatics (NOI 2021) in July 29, 2021
- Platinum Winner (1st place) in US OPEN of USA Computing Olympiad (USACO) in Apr. 2021

Experience

- **Undergraduate Research in Database System (Management of Data)** **PolyU, Hong Kong**
Supervised by Prof. SHI Jieming *Feb 2024 - Present*
 - Do a survey and experiment on the existing exact KNN (K-Nearest Neighbors) algorithm (mainly focusing on huge dimensions like LiteHST)
 - Try to design a new data structure that can embed points into and have a high performance.
- **Organizer of Poly Competitive Programming Club** **PolyU, Hong Kong**
Student Assistant of COMP Programming Team *Jan 2024 - Present*
 - Try to create a club for the PolyU Department of Computing, which is sustainable development
 - Built a Discord chat channel to give new members and pupils information and resources.
 - Created and assigned training sessions (Codeforces, QOJ, UCUP) to improve competitive programming skills.

Administrator of QOJ and Universal Cup

- <https://qoj.ac/user/profile/MoRanSky>
<https://contest.ucup.ac/user/profile/MoRanSky>

Dec 2023 - Present

- Use Tuack to transfer the problem's format of the competitive programming
- Manage problem system and upload problem data (UOJ - QOJ format)

SureFire UAV (unmanned aerial vehicle)

- *Responsible for Computer Vision; Supervised by Prof. WANG Qixin*

PolyU, Hong Kong
Nov 2023 - May 2024

- Try and compare different camera calibration algorithms (pinhole camera model, SFM, MVS, colmap) and point cloud registration algorithms (ICP, FMR, DGR).

Tencent Spark Challenge Week

- *Computer Vision Direction*

Tencent Headquarters, Beijing
Aug 2023

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

Projects

Competitive Programming Template

- *Source: <https://github.com/DMoRanSky/cp-template>*

Feb, 2021 -

It's designed and extracted from my 5000+ competitive programming problems submission and contains 3500+ lines using C++, which includes all mainstream knowledge.

Sixteen Kingdoms Card

- *Runner up of the "Discovery Cup" Youth Programming Challenge*

Beijing
2017

Independently developed a Landlord game using front-end language (HTML/JavaScript/CSS), which combines the historical themes of the Sixteen Kingdoms and contains 2000+ lines of code.

Split Machine

- *Minecraft Plugin, source: <https://github.com/DMoRanSky/splitmachine>
https://gitee.com/moran_sky/SplitMachine*

Jan, 2017

A plug-in of Minecraft Server for dismantling items in the original environment was developed using Java language.

Technical and Personal skills

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