Qiyang He

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🎓 Education

Southern University of Science and Technology (SUSTech), Shenzhen, China   2016 – Present
Undergraduate in Computer Science and Engineering (CSE)
GPA: 3.86 / 4.00 (92.6 / 100) Rank: 3 / 146
Major GPA: 3.92 / 4.00
1st in Discrete Math, Data structure and Algorithms, Mathematical analysis, Probability and Statistics

University of California, Irvine (UCI), Irvine, USA   Jul. 2019 – Sep. 2019
Visiting Student in Information and Computer Sciences (ICS)
GPA: 4.00 / 4.00

👥 Research Experience

Improving Data Ingestion Performance in Apache AsterixDB   Jul. 2019 – Sep. 2019
Research Intern **Prof. Michael J. Carey**   UC Irvine ICS

Data is parsed using a single node since the data intaking module and the data parsing module are coupled together in AsterixDB currently, which does not utilize the advantage of distributed architecture of AsterixDB. I worked to tackle this limitation.
- **Decoupled the data intaking and data parsing** in the data feed
- Made the data parsing **parallel** and **optimize the efficiency** of data ingestion
- **Designed comprehensive experiment settings** to evaluate the improvement

Discovering Top-k Newsworthy Facts from Multidimensional Dataset   Nov. 2018 – Jun. 2019
Research Assistant   Supervisor: **Prof. Bo Tang**   SUSTech CSE

The program serves to find intriguing facts through an efficient algorithm framework and an insightful measurement.
- **Implemented skyline, prominent streak** and other operators
- Proposed a **score function** and non-trivial **pruning techniques**

Improving Maximum Inner Product Search by GPU   Nov. 2019 – Present
Research Assistant   Supervisor: **Prof. Bo Tang** & **Xiao Yan**   SUSTech CSE

State-of-the-art of MIPS (maximum inner product search) is calculated by CPU based on the graph index. We are trying to develop a GPU-based algorithm to solve MIPS.

♡ Honors and Awards

Gold Medal, ACM-ICPC Asia Regional Contest Qingdao Site (20 / 354)	Nov. 2018
Silver Medal, ACM-ICPC Asia Regional Contest Nanjing Site	Oct. 2018
Bronze Medal, Chinese Collegiate Programming Contest **Final**	Nov. 2018
Silver Medal, Chinese Collegiate Programming Contest Guilin Site	Oct. 2018
Gold Medal, Chinese Collegiate Programming Contest (Guangdong Province)	May 2018
Bronze Medal, National Olympiad in Informatics, China	Jul. 2015
1st Prize, Scholarship for Outstanding SUSTech Student (5%)	2018, 2019

* I am responsible for **Data Structure** and **Computational Geometry** in the programming team
* I also used to be the **founder**, **captain** and **student coach** of SUSTech programming Team
* I am the **problem setter** for 2018 SUSTech programming contest sponsored by **Huawei**, **Tencent**, **ByteDance**