



香港中文大學 (深圳)
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Education Background

The Chinese University of Hong Kong, Shenzhen

Sep 2022 — Now

Ph.D. in Computer Science (Expected 2027)

- Supervisor: [Prof. Yeh-Ching CHUNG](#)
- Cumulative GPA: 3.815 / 4.000 (Up to now)

The Chinese University of Hong Kong, Shenzhen

Sep 2018 — Jun 2022

Bachelor in Computer Science and Engineering

- Cumulative GPA: 3.517 / 4.000, Top 20% (29 / 144)
- Major GPA: 3.576 / 4.000

Publications

- **Liu, Y (1st Author).**, Chen, S., Chung, Y. (2026). Barbell: An Extensible Generator of On-Demand Loads for Interactive Cloud Services. In Advanced Parallel Processing Technologies - 17th International Symposium, APPT 2026, Brussels, Belgium (**APPT'26**) (Accepted). [CCF-C]
- Lai, L., Yang, Y., Wang, Z., **Liu, Y (4th Author).**, Ma, H., Shen, S., ... & Zhou, J. (2023). GLogS: Interactive Graph Pattern Matching Query At Large Scale. In 2023 USENIX Annual Technical Conference (**USENIX ATC'23**) (pp. 53-69). [CCF-A]

Patents

- US. Patent Pending, "GRAPH QUERY METHOD", Application filed on 1 April 2024.

Internship Experiences

Research Intern

System Engineering Department, Huawei Cloud

Feb 2023 — Dec 2024

- Key member of the research collaboration project between CUHK(SZ) and Shuhai Lab, Huawei Cloud
- Design and implement the load generator for six latency-sensitive services in Huawei
- Improve the flexibility and extensibility of existing load generators with a fully decoupled framework
- Perform workload characterization by analyzing real traces (Redis, MySQL, etc.) in Huawei
- Project GitHub Repository (private): <https://gitee.com/tonyyxliu/Barbell>
- Project Supervisor: [Dr. Chen Shuang](#), [Prof. Yu Zhibin](#), [Prof. Yeh-Ching CHUNG](#)

Research Intern

Damo Academy, Alibaba

Jun 2022 — Feb 2023

- Key member of the research collaboration project between CUHK(SZ) and Damo Academy, Alibaba
- Largely improve the efficiency of graph pattern match in Alibaba's GraphScope framework
- Design and implement the graph catalog to find optimized logical execution plan with a cost model
- Implement efficient algorithms for graph isomorphism check and optimized execution plan generator
- Project GitHub Repository: <https://github.com/MeloYang05/GraphScope>
- Project Supervisor: [Dr. Lai Longbin](#), [Prof. Yeh-Ching CHUNG](#)

Frontend Development Intern**Tencent****May 2021 — Sep 2021**

- Responsible for developing utility components for the team's low code development platform
- Efficiently utilizing the low code platform to develop various web pages internally used in Tencent
- Implement industry-level unit tests for components of low code platform with Vue and Jest

Frontend Development Intern**Kingdee Software (China)****Mar 2021 — May 2021**

- Responsible for developing BI dashboards with React toolchain and ECharts
- Implement responsible and adaptive web pages with complicated styling and animation.

Awards

- Teaching Assistant Award, 2023-24 Academic Year, School of Data Science, CUHK(SZ)
- Teaching Assistant Award, 2022-23 Academic Year, School of Data Science, CUHK(SZ)
- Dean's List, 2021-2022 Academic Year, School of Data Science, CUHK(SZ)
- Dean's List, 2019-2020 Academic Year, School of Data Science, CUHK(SZ)
- Bowen Scholarship & Liyun Scholarship, 2018-2022 Academic Year, CUHK(SZ)

Skills

- **Full-Stack Software Development:** experienced in both React/Vue/JavaScript in frontend and MySQL/Redis/HTTP in backend. Familiar with network protocols, RESP, and microservice architecture.
- **Parallel/Distributed Programming:** can efficiently speedup programs both with MPI/SIMD/OpenMP in CPU using C/C++ and CUDA/Triton in GPU. Also, can improve program's cache locality issues.
- **Cloud Service Benchmarking:**
- **Computing Cluster Management:** four-year experience of managing and maintaining of a distributed computing cluster of about 50 nodes. Experienced Slurm administrator and network security resolver.
- **English & Presentation:** IELTS: 7.0 / 9.0, CET-6: 581 / 710, years of experience in offering course tutorials

Teaching Experiences

Leading TA of CSC4005: Parallel Programming in CUHK(SZ)

- Duration: 4 semesters (Academic Year 2022-23Fall, 2023-24Fall, 2024-25Fall, 2025-26Fall)
- Build the distributed computing cluster with Slurm and perform regular maintenance and software updates
- Keep updating and implementing programming projects with SOTA techniques like Triton and Flash Attention
- Offer tutorials on popular parallel programming techniques, such as MPI/SIMD/Pthread/OpenMP/CUDA.
- GitHub Repository of Course Materials: <https://github.com/tonyyxliu/CUHKSZ-CSC4005/tree/main>
- Supervisor: [Prof. Wei-Chung HSU](#), [Prof. Yeh-Ching CHUNG](#)

Leading TA of CSC4180: Compiler Construction in CUHK(SZ)

- Duration: 2 semesters (Academic Year 2023-24Spring, 2024-25Spring)
- Update and implement programming projects to root in modern multi-pass compiling architecture.
- Offer tutorials to LLVM's multi-pass architecture and traditional scanning and parsing techniques.
- GitHub Repository of Course Materials: <https://github.com/tonyyxliu/CSC4180-Compiler>
- Supervisor: [Prof. Yeh-Ching CHUNG](#)

Leading TA of DDA2003: Visual Analytics in CUHK(SZ)

- Duration: 1 semester (Academic Year 2022-23 Spring)
- Assist the supervisor to implement and grade all course programming projects.
- Offer tutorials on front-end development tools, such as HTML/CSS/JavaScript, and data visualization tools.
- Supervisor: [Prof. Han Jun](#)