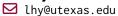
Haoyu Li



https://lihy0529.github.io/

Education

Ph.D. in CS, UT Austin. Advisor: Aditya Akella and Daehyeok Kim. Research interest: 2023 - 2028 Computer networks, systems for machine learning.

UPDATE: Oct 4, 2023

(Summa Cum Laude) B.S. in CS, Turing Class, Peking University. GPA: 3.869/4 (1%) 2019 - 2023Advisor: Tong Yang. Research interest: Databases, theoretical computer science.

Publications (by Date)

- H. Li, L. Wang, Q. Chen, et al., "Chainedfilter: Combining membership filters by chain rule," Proceedings of the 2024 International Conference on Management of Data, 2023.
- X. Li, Z. Fan, H. Li, et al., "Steadysketch: Finding steady flows in data streams," in 2023 IEEE/ACM 31st International Symposium on Quality of Service (IWQoS), IEEE, 2023, pp. 01-09.
- R. Qiu, Y. Ming, Y. Hong, H. Li, and T. Yang, "Wind-bell index: Towards ultra-fast edge query for graph databases," in 2023 IEEE 39th International Conference on Data Engineering (ICDE), IEEE, 2023, pp. 2090-2098.
- Z. Wang, Z. Zhong, J. Guo, et al., "Rencoder: A space-time efficient range filter with local encoder," in 2023 IEEE 30th International Conference on Data Engineering (ICDE), IEEE, 2023, pp. 2036–2049.
- H. Li, Q. Chen, Y. Zhang, T. Yang, and B. Cui, "Stingy sketch: A sketch framework for accurate and fast frequency estimation," Proceedings of the VLDB Endowment, vol. 15, no. 7, pp. 1426-1438, 2022.

Research Experience

- Graduate Research Assistant @ UT Austin, advised by Prof. Daehyeok Kim and Aditya 2023 Akella. I worked on distributed systems for machine learning, to reduce the communication overhead among different worker nodes.
 - Research Assistant @ UT Austin, advised by Prof. Aditya Akella and Tong Yang. I worked on theoretical computer science and develop an integral and complete theory for static membership problems, which provides a solid ground truth for future work.
- Research Assistant @ Harvard University, advised by Prof. Minlan Yu. I worked on a 2022 switch architecture project to introduce 2d-mesh structure into programmable switches.
- Research Assistant @ Peking University, advised by Prof. Tong Yang. I worked on 2021 - 2022 probabilistic structures for data streams. To be more specific, I focus on fundamental algorithms including (1) frequency estimation, where I propose a fast and accurate sketch framework which outperforms SOTAs in both speed and accuracy, (2) relational query index, (3) range query index and (4) quantile estimation algorithms.

Miscellaneous Experience

2020 - 2023 Turing Class Monitor.

> Chair of Turing Student Research Forum. 2022

2021 Teaching Assistant for Introduction to Computer Systems. I taught CSAPP two hours per week to help undergrauates consolidate knowledge.

Freshmen Counselor.

Miscellaneous Experience (continued)

- Leader of the College Debating Team.
- Minister of the Zhongying Public Welfare Association.

Miscellaneous Experience

Undergraduate

Scholarships | Zhongying Moral Education Scholarship (16,000 CNY), 2020-2023.

SenseTime Scholarship (30 in China, 20,000 CNY), 2022.

Arawana Scholarship (12,000 CNY), 2022.

National Scholarship (1%, 16,000 CNY), 2021.

National Scholarship (1%, 16,000 CNY), 2020.

Honors Outstanding Graduate, Beijing (5%), 2023.

Outstanding Graduate, Peking University, 2023.

Weiming Scholar, 2023.

Merit Student (1/26), 2023.

Outstanding Undergraduate Thesis, Peking University (3%), 2023.

Merit Student Pacesetter (1/26), 2021.

Merit Student (1/30), 2020.

Awards Outstanding Undergraduate Research Project (4,000 CNY), 2023.

Academic Innovation Award (1%), 2022.

First Prize of Challenge Cup Research Competition (1/11, 3,000 CNY), 2022.

First Prize of Huawei Cup Innovation Competition (1/16, 4,000 CNY), 2022.

Personal

Hobby I like psychology and photograph. For the future five years, I want to learn foreign languages like Spanish and German, as well as pickup an instrument.

Reach Out Preffered) email: lhy@utexas.edu (For Chinese) wechat: lhy382308889

Phone: (+1) 737-343-3908 LinkedIn: haoyu-li-bb554928b

Social Media Homepage: lihyo529.github.io Github: github.com/lihyo529

Twitter: Haoyu Harry Li Youtube: https://www.youtube.com/@HaoyuLi-ox6yg