Zhaoheng (Billy) Li

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Research	**Systems for AI and ML; Interactive Data Analytics; Vector Databases; Graph Algorithms**

Education

Ph.D., Computer Science — Aug 2021 - May 2026 (expected)
University of Illinois at Urbana Champaign
● Advisor: Yongjoo Park

B.S., Statistics and Computer Science — Aug 2017 - May 2021
University of Illinois at Urbana Champaign
● *Magna Cum Laude and with Highest Distinction in Statistics and Computer Science*
● *High Distinction in Mathematics*
● Thesis: REFORM: Fast and Adaptive Solution for Subteam Replacement
● Advisor: Hanghang Tong

Professional Experience

Research Assistant — Aug 2021 - Present
University of Illinois at Urbana Champaign
CreateLab

Research Intern — May 2024 - Oct 2025
ByteDance Inc.
Systems Infrastructure Lab

Software Engineer Intern — May 2023 - Aug 2023
Google LLC
Google Cloud, Google BigQuery

Software Engineer Intern — May 2022 - Aug 2022
Google LLC
Google Cloud, Systems & Storage Infrastructure

Research Assistant — Aug 2020 - May 2021
University of Illinois at Urbana Champaign
IDEA Lab

Software Engineer Intern — May 2020 - Aug 2020
Google LLC
Google Ads, Google Local Services

Software Engineer Intern — May 2019 - Aug 2019
Google Canada Corporation
Google Ads, Google Ads Experiments

Awards

Travel Grant, PyCon 2025 — March 2025

Travel Award, ICDE 2023 — March 2023

Finalist, C1Games Terminal Game AI competition	September 2019
Best Data Visualization Award, Illini Datathon	February 2019
Top in China, Cambridge CIE AS Sociology exam	October 2016
National Finalist, High School Mathematical Contest in Modeling (HIMCM)	February 2015

Publications

1. **Zhaoheng Li**, Supawit Chockchowwat, Ribhav Sahu, Arret Sheth, Yongjoo Park
   Kishu: Time-traveling for Computational Notebooks
   VLDB 2025 (research): 51st International Conference on Very Large Databases, London, United Kingdom, 2025

2. **Zhaoheng Li**, Supawit Chockchowwat, Hanxi Fang, Yongjoo Park
   Demo of Kishu: Time-traveling for Computational Notebooks
   SIGMOD 2025 (demo track): ACM Special Interest Group on Management of Data, Berlin, Germany, 2025

3. **Zhaoheng Li**, Pranav Gor, Rahul Prabhu, Hui Yu, Yuzhou Mao, Yongjoo Park
   ElasticNotebook: Enabling Live Migration for Computational Notebooks
   VLDB 2024 (research): 50th International Conference on Very Large Databases, Guangzhou, China 2024

4. **Zhaoheng Li**, Supawit Chockchowwat, Hanxi Fang, Ribhav Sahu, Sumay Thakurdesai, Kantanat Pridaphatrakun, Yongjoo Park
   Demo of ElasticNotebook: Migrating Live Computational Notebook States
   SIGMOD 2024 (demo track): ACM Special Interest Group on Management of Data, Santiago, Chile, 2024

5. Supawit Chockchowwat, **Zhaoheng Li**, Yongjoo Park
   Transactional Python for Durable Machine Learning: Vision, Challenges, and Feasibility
   SIGMOD DEEM 2023 (short paper): 7th Workshop on Data Management for End-to-End Machine Learning, Seattle, USA, 2023

6. **Zhaoheng Li**, Xinyu Pi, Yongjoo Park
   S/C: Speeding up Data Materialization with Bounded Memory
   ICDE 2023 (research): 39th International Conference on Data Engineering, Anaheim, USA, 2023

7. **Zhaoheng Li**, Xinyu Pi, Mingyuan Wu, Hanghang Tong
   REFORM: Fast and Adaptive Solution for Subteam Replacement
   IEEE BigData 2021 (research): IEEE International Conference on Big Data, 2021

8. **Zhaoheng Li**, Xinyu Pi, Mingyuan Wu
   Subteam Replacement: Problem Definition and Fast Solution
   SIGMOD SRC 2021 (extended abstract): ACM Special Interest Group on Management of Data Student Research Competition, Xi'An, China, 2021

Teaching		
	ML and Data Systems (CS 598)	
	Teaching Assistant, University of Illinois at Urbana-Champaign	Spring 2024
	Game Development (CS 498)	
	Teaching Assistant, University of Illinois at Urbana-Champaign	Spring 2022
	Introduction to Computer Science (CS 125)	
	Course Assistant, University of Illinois at Urbana-Champaign	Spring 2018

Talks		
	PyCon, Pittsburgh, USA	May 2025
	VLDB, Guangzhou, China	August 2024
	SIGMOD, Santiago, Chile	June 2024
	ICDE, Anaheim, USA	April 2023
	IEEE BigData (Virtual)	December 2021
	SIGMOD SRC, Xi'An, China (Virtual)	June 2021