

# Zhaoheng (Billy) Li

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Thomas M. Siebel Center, Rm 2119  
201 North Goodwin Avenue  
Urbana, IL 61801

[billyzhaohengli.github.io](https://billyzhaohengli.github.io)  
[zl20@illinois.edu](mailto:zl20@illinois.edu)  
+1 217-721-0260

Research	<b>Systems for AI and ML; Interactive Data Analytics; Vector Databases; Graph Algorithms</b>	
Education	<b>Ph.D., Computer Science</b> University of Illinois at Urbana Champaign • Advisor: Yongjoo Park	Aug 2021 - May 2026 (expected)
	<b>B.S., Statistics and Computer Science</b> University of Illinois at Urbana Champaign • <i>Magna Cum Laude and with Highest Distinction in Statistics and Computer Science</i> • <i>High Distinction in Mathematics</i> • Thesis: REFORM: Fast and Adaptive Solution for Subteam Replacement • Advisor: Hanghang Tong	Aug 2017 - May 2021
Professional Experience	<b>Research Assistant</b> University of Illinois at Urbana Champaign <a href="#">CreateLab</a>	Aug 2021 - Present
	<b>Research Intern</b> ByteDance Inc. Systems Infrastructure Lab	May 2024 - Oct 2025
	<b>Software Engineer Intern</b> Google LLC Google Cloud, Google BigQuery	May 2023 - Aug 2023
	<b>Software Engineer Intern</b> Google LLC Google Cloud, Systems & Storage Infrastructure	May 2022 - Aug 2022
	<b>Research Assistant</b> University of Illinois at Urbana Champaign IDEA Lab	Aug 2020 - May 2021
	<b>Software Engineer Intern</b> Google LLC Google Ads, Google Local Services	May 2020 - Aug 2020
	<b>Software Engineer Intern</b> Google Canada Corporation Google Ads, Google Ads Experiments	May 2019 - Aug 2019
Awards	<b>Travel Grant</b> , PyCon 2025	March 2025
	<b>Travel Award</b> , ICDE 2023	March 2023

<b>Finalist</b> , C1Games Terminal Game AI competition	September 2019
<b>Best Data Visualization Award</b> , Illini Datathon	February 2019
<b>Top in China</b> , Cambridge CIE AS Sociology exam	October 2016
<b>National Finalist</b> , 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	<b>ML and Data Systems (CS 598)</b>	
	Teaching Assistant, University of Illinois at Urbana-Champaign	Spring 2024
	<b>Game Development (CS 498)</b>	
	Teaching Assistant, University of Illinois at Urbana-Champaign	Spring 2022
	<b>Introduction to Computer Science (CS 125)</b>	
	Course Assistant, University of Illinois at Urbana-Champaign	Spring 2018
Talks	<b>PyCon</b> , Pittsburgh, USA	May 2025
	<b>VLDB</b> , Guangzhou, China	August 2024
	<b>SIGMOD</b> , Santiago, Chile	June 2024
	<b>ICDE</b> , Anaheim, USA	April 2023
	<b>IEEE BigData</b> (Virtual)	December 2021
	<b>SIGMOD SRC</b> , Xi'An, China (Virtual)	June 2021