

Supawit Chockchowwat

Email: supawit@cmkl.ac.th, supawit@google.com
Phone: (267) 694-2530

RESEARCH	Data Management; Data Mining; Machine Learning; Distributed Systems	
EDUCATION	Ph.D., Computer Science University of Illinois Urbana-Champaign Advisor: Yongjoo Park Committee: Yongjoo Park, Hari Sundaram, Indranil Gupta, Fatma Özcan	Aug 2020 – May 2025
	B.S., Computer Science University of Texas at Austin Turing Scholars Honors Computational Science and Engineering Certificate	Aug 2016 – May 2020
PROFESSIONAL EXPERIENCE	Assistant Professor CMKL University	Jul 2026 – Present
	Visiting Faculty Researcher Google LLC Database/Analytics Efficiency and Codesign Efficiency, TI	Jun 2025 – Present
	Research Assistant University of Illinois at Urbana-Champaign CreateLab, DAIS	Aug 2020 – May 2025
	Software Engineer Intern Google LLC Database Efficiency, Technical Systems and Infrastructure	May – Aug 2024
	Software Engineer Intern Google LLC AlloyDB, GCP Databases	May – Aug 2023
	Software Engineer Intern Google LLC Data Pipeline, GCP Data Analytics	May – Aug 2022
	Project Manager, Research Assistant University of Illinois at Urbana-Champaign CreateLab, DAIS	May – Aug 2021
	Backend Engineer Intern Robinhood Markets, Inc. Spending, Cash Area	May – Aug 2020
	Infrastructure Engineer Intern Facebook, Inc. Location-Aware Distribution (LAD), Core System	Jun – Aug 2019
Software Engineer Intern Uber Technologies, Inc. Business Intelligence (BI), Data Platform	May – Aug 2018	

MEMBERSHIPS	CreateLab, DAIS Advised by Yongjoo Park.	Aug 2020 – Present
	Center for Computational Visualization (CVC) Advised by Chandrajit L. Bajaj.	Jan 2018 – May 2020
	Personal Autonomous Robotics Lab (PeARL) Advised by Scott Niekum and Caleb C. Chuck.	Aug 2018 – May 2019
	Neural Networks Research Group (NNRG) Advised by Cem C. Tutum.	Oct 2016 – May 2018
CURRENT PROJECTS	Transactional Data Analytics <ul style="list-style-type: none"> • Augment analytics with DBMS for durability, atomicity, replicability, and time-versioning. • Design partial object storage and data distribution for a state management system. • Study on user interfaces that enhance the user experience in transactional analytics. 	
	Database Tuning: Indexes and Layouts <ul style="list-style-type: none"> • Generalize and specialize to adapt towards data, workload, and system characteristics. 	
	Data Engines for Large Language Models <ul style="list-style-type: none"> • Analyze large language models (LLMs) to optimize their operational costs. 	
TEACHING	Advanced Data Management (CS 511) Teaching Assistant, University of Illinois at Urbana-Champaign, Fall 2023	
	Data Structures (CS 225) Teaching Assistant, University of Illinois at Urbana-Champaign, Spring 2022 <ul style="list-style-type: none"> • Guide three lab sections, advise nine projects, and hold office hours. 	
AWARDS	Best Demonstration, SIGMOD 2025	Jun 2025
	Honorable Mention Best Artifact, SIGMOD 2023	Jun 2024
	Conference Presentation Awards for Graduate Students, Graduate College University of Illinois at Urbana-Champaign	May 2024
	Conference Presentation Awards for Graduate Students, Graduate College University of Illinois at Urbana-Champaign	May 2022
	Selected Student Attendee, 2020 The Cornell, Maryland, Max Planck Pre-doctoral Research School 2020	Aug 2020
	Research Distinction, College of Natural Sciences	Apr 2020
	Honorable Mention, 2019/20 CRA Undergraduate Research Award	Dec 2019
	Research Distinction, College of Natural Sciences The University of Texas at Austin	Apr 2019
	28th (21st Tie, 3rd North America), 2019 ACM ICPC World Finals With Ethan Arnold and Ryan Rice	Apr 2019

First Place , 2019 ACM ICPC South Central USA Regional Contest	Nov 2018
Marjorie Morales Award for Excellence in Computer Science and Computer Engineering , 2018 Undergraduate Research Forum	Apr 2018
109th (56th Tie) , 2017 ACM ICPC World Finals With Brian Richer and Alex Meed	May 2017
First Place , 2017 ACM ICPC South Central USA Regional Contest	Oct 2016
First Place & Best Code Implementation , 2016 IEEE RAS Robotathon	Nov 2016
First Place Gold Medal , 2014 Thailand Olympiad in Informatics	May 2014

FELLOWSHIPS	Graduate College CS PhD Fellowship Addendum	Sep 2024 – May 2025
	Graduate College CS PhD Fellowship	Oct 2023 – May 2024
	Thai Scholars '58, IOI Olympic Scholarships	Jul 2015 – Present
	Freshman Research Initiative Fellowship	May – Aug 2017

PUBLICATIONS

1. LazyAttention: Efficient Retrieval-Augmented Generation with Deferred Positional Encoding
Haocheng Xia, Mihir Pamnani, Hanxi Fang, **Supawit Chockchawat**, Yongjoo Park
ICML'26: 43rd International Conference on Machine Learning, Seoul, South Korea, July 2026.
2. **Supawit Chockchawat**, Sumay Thakurdesai, Zhaoheng Li, Matthew S. Krafczyk, Yongjoo Park
Chipmink: Efficient Delta Identification for Massive Object Graph
VLDB'26: 52nd International Conference on Very Large Data Bases, Boston, USA, September 2026.
3. Zhaoheng Li, **Supawit Chockchawat**, Ribhav Sahu, Areet Sheth, Yongjoo Park
Kishu: Time-Traveling for Computational Notebooks
VLDB'25: 51st International Conference on Very Large Data Bases, London, United Kingdom, September 2025.
4. Zhaoheng Li, **Supawit Chockchawat**, Hanxi Fang, Yongjoo Park
Demo of Kishu: Time-Traveling for Computational Notebooks (Demo Paper)
SIGMOD'25: ACM Special Interest Group on Management of Data, Berlin, Germany, June 2025.
Best Demonstration, SIGMOD 2025
5. **Supawit Chockchawat**
Self-Tuning Data Exploration Checkpoint (Dissertation)
IDEALS, University of Illinois Urbana-Champaign, April 2025
6. Hanxi Fang, **Supawit Chockchawat**, Hari Sundaram, Yongjoo Park
Enhancing Computational Notebooks with Code+Data Space Versioning
CHI'25: ACM Conference on Human Factors in Computing Systems, Yokohama, Japan, April 2025.
7. Hanxi Fang, **Supawit Chockchawat**, Hari Sundaram, Yongjoo Park
Large-Scale Evaluation of Notebook Checkpointing with AI Agents
CHI LBW'25: ACM Conference on Human Factors in Computing Systems (Late-Breaking Work), Yokohama, Japan, April 2025.
8. Zhaoheng Li, **Supawit Chockchawat**, Hanxi Fang, Ribhav Sahu, Sumay Thakurdesai, Kantanat Pridaphatrakun, Yongjoo Park

Demonstration of ElasticNotebook: Migrating Live Computational Notebook States (Demo Paper)
SIGMOD'24: ACM Special Interest Group on Management of Data, Santiago, Chile, June 2024.

9. **Supawit Chockchowwat**, Wenjie Liu, Yongjoo Park
AirIndex: Versatile Index Tuning Through Data and Storage
SIGMOD'24: ACM Special Interest Group on Management of Data, Santiago, Chile, June 2024.
10. Nikhil Sheoran*, **Supawit Chockchowwat***, Arav Chheda, Suwen Wang, Riya Verma, Yongjoo Park
A Step Toward Deep Online Aggregation
SIGMOD'23: ACM Special Interest Group on Management of Data, Seattle, USA, June 2023.
Honorable Mention Best Artifact, SIGMOD 2023
** Equally contributed.*
11. **Supawit Chockchowwat**, Zhaoheng Li, Yongjoo Park
Transactional Python for Durable Machine Learning: Vision, Challenges, and Feasibility (Short Paper)
DEEM at SIGMOD'23: 7th Workshop on Data Management for End-to-End Machine Learning, Seattle, USA, June 2023.
12. **Supawit Chockchowwat**, Yongjoo Park
Automatically Finding Optimal Index Structure (Extended Abstract)
AIDB at VLDB'22: 4th International Workshop on Applied AI for Database Systems and Applications, Sydney, Australia, September 2022.
13. **Supawit Chockchowwat**
Tuning Hierarchical Learned Indexes on Disk and Beyond (Abstract)
SIGMOD SRC'22: ACM Special Interest Group on Management of Data Student Research Competition, Philadelphia, USA, June 2022.
14. **Supawit Chockchowwat**, Chaitanya Sood, Yongjoo Park
Airphant: Cloud-oriented Document Indexing
ICDE'22: 38th International Conference on Data Engineering, Kuala Lumpur, Malaysia, May 2022.
15. Caleb C. Chuck, **Supawit Chockchowwat**, Scott Niekum
Hypothesis Driven Exploration for Deep Reinforcement Learning
IROS'20: International Conference on Intelligent Robots and Systems, Las Vegas, USA, October 2020.
16. Cem C. Tutum, **Supawit Chockchowwat**, Etienne Vouga, Risto Miikkulainen
Functional Generative Design: An Evolutionary Approach to 3D-Printing
GECCO'18: Genetic and Evolutionary Computation Conference, Kyoto, Japan, July 2018.

TECHNICAL REPORTS

1. **Supawit Chockchowwat**, Chandrajit L. Bajaj
Probabilistic PolarGMM: Unsupervised Cluster Learning of Very Noisy Projection Images of Unknown Pose
arXiv:2206.12959, June 2022.
2. Jiaxin Wu, **Supawit Chockchowwat**
Step Out of Your Comfort Zone: More Inclusive Content Recommendation for Networked Systems
arXiv:2106.10408, June 2021.

TALKS	UIUC CS511, Urbana, USA (Virtual)	Nov 2025
	SIGMOD, Santiago, Chile	Jun 2024
	DEEM at SIGMOD, Seattle, USA	Jun 2023
	AIDB at VLDB, Sydney, Australia (Virtual)	Sep 2022

SIGMOD SRC, Philadelphia, USA (Virtual)

Jun 2022

ICDE, Kuala Lumpur, Malaysia (Virtual)

May 2022

SERVICES

Reviewer, International Conference on Very Large Data Bases (VLDB) 2027

Light Load Reviewer, International Conference on Very Large Data Bases (VLDB) 2026

Program Committee, European Conference on Computer Systems (EuroSys) 2026

Shadow Program Committee, European Conference on Computer Systems (EuroSys) 2026

Reviewer, ACM SIGMOD Availability & Reproducibility Initiative (ARI) 2025

Reviewer, ACM SIGMOD Availability & Reproducibility Initiative (ARI) 2024

Reviewer, IEEE Transactions on Knowledge and Data Engineering (TKDE), 2024

Reviewer, ACM SIGMOD Availability & Reproducibility Initiative (ARI), out-of-cycle 2023

Reviewer, ACM SIGMOD Availability & Reproducibility Initiative (ARI) 2023

Reviewer, Machine Learning and Systems (MLSys) Artifact Evaluations 2023