Dujian Ding

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EDUCATION		
University of British Columbia, Vancouver, Canada		Sept. 2019 - Present
Ph.D. in Computer Science		
Anticipated Graduation: May, 2025		

Simon Fraser University, Vancouver, Canada　　Sept. 2016 - May 2019
B.Sc. in Computer Science, Dual Degree Program with Distinction

Zhejiang University, Hangzhou, China　　Sept. 2014 - Jun. 2019
B.Eng. in Computer Science and Technology, Dual Degree Program with Distinction

RESEARCH INTERESTS

Efficient ML Models, Hybrid ML Inference.
Bring Efficiency Into & Onto Machine Learning.

EXPERIENCE

Research Assistant - Prof. Laks V.S. Lakshmanan　　Sept. 2019 - Present
University of British Columbia　　Vancouver, BC, Canada

Research Scientist Intern - Dr. Ankur Mallick　　June 2024 - Sept. 2024
M365 Research, Microsoft　　Redmond, WA, U.S.

Research Scientist Intern - Dr. Subhabrata Mukherjee June 2023 - Aug. 2023
MSR, Microsoft　　Redmond, WA, U.S.

Applied Scientist Intern - Dr. Nagesh Panyam　　Sept. 2022 - Dec. 2022
Alexa AI, Amazon　　Sunnyvale, CA, U.S.

Research Assistant - Prof. Martin Ester　　May 2018 - Dec. 2018
Simon Fraser University　　Vancouver, BC, Canada

PUBLICATIONS

Semantic Scheduling for LLM Operating System
Under Review
Wenyue Hua*, **Dujian Ding***, Yile Gu, Yujie Ren, Kai Mei, Yicheng Zhang, Minghua Ma

Navigating the Prompt Space: Supervision Matters in CoT When Reasoning Misleads
ACL (main conference), 2025
Xiang Zhang, Juntai Cao, Chenyu You, **Dujian Ding**

BEST-Route: Adaptive LLM Routing with Test-Time Optimal Compute
ICML, 2025
Dujian Ding, Ankur Mallick, Shaokun Zhang, Chi Wang, Daniel Madrigal, Mirian Del Carmen Hipolito Garcia, Menglin Xia, Laks V.S. Lakshmanan, Qingyun Wu, Victor Rühle

EcoAct: Economic Agent Determines When to Register What Action
ICLR (Reasoning and Planning for LLMs Workshop), 2025
Shaokun Zhang, Jieyu Zhang, **Dujian Ding**, Mirian Del Carmen Hipolito Garcia, Ankur Mallick, Daniel Madrigal, Menglin Xia, Victor Rühle, Qingyun Wu, Chi Wang

OCCAM: Towards Cost-Efficient and Accuracy-Aware Classification Inference

ICLR, 2025
Dujian Ding, Bicheng Xu, Laks V.S. Lakshmanan

PASS: Pruning Attention Heads with Almost-sure Sparsity Targets
TMLR, 2024
Dujian Ding, Ganesh Jawahar, Laks V.S. Lakshmanan

LLM Performance Predictors are good initializers for Architecture Search
ACL (Findings), 2024
Ganesh Jawahar, Muhammad Abdul-Mageed, Laks V.S. Lakshmanan, **Dujian Ding**

Hybrid LLM: Cost-Efficient and Quality-Aware Query Routing
ICLR, 2024
Dujian Ding, Ankur Mallick, Chi Wang, Robert Sim, Subhabrata Mukherjee, Victor Rühle, Laks V.S. Lakshmanan, Ahmed Hassan Awadallah

On Efficient Approximate Queries over Machine Learning Models
VLDB, 2023
Dujian Ding, Sihem Amer-Yahia, Laks V.S. Lakshmanan

Uncovering the subtype-specific temporal order of cancer pathway dysregulation
PLOS Computational Biology, 2019
Sahand Khakabimamaghani, **Dujian Ding**, Oliver Snow, Martin Ester

Collaborative Intra-tumor Heterogeneity Detection
Bioinformatics, 2019
Sahand Khakabimamaghani, Salem Malikic, Jeffrey Tang, **Dujian Ding**, Ryan Morin, Leonid Chindelevitch, Martin Ester

PROFESSIONAL SERVICE	Serving as reviewers for ICML 2025, ICLR 2025, SIGMOD 2025, SIGMOD 2024, VLDB 2023 (PVLDB 16), VLDB 2022 (PVLDB 15), RecSys 2022, WWW 2020.
	Serving as the session chair for Session E7 (Trajectories & Time Series), VLDB 2023, Vancouver, Canada.
	Volunteering for VLDB 2023, Vancouver, Canada.

TALKS	**On Efficient Approximate Queries over Machine Learning Models**	
	Session U6 (Scalable ML III), VLDB 2023, Vancouver, Canada	Aug. 2023
	Hybrid LLM: Model Orchestration across Edge and Cloud	
	JEM Intern Talk Session 3, MSR	Aug. 2023

HONOURS & AWARDS	**ICLR 2025 Financial Assistance Award**	Mar. 2025
	Awarded the B.Sc. Degree with Distinction	Aug. 2019
	Undergraduate Student Research Award	Mar. 2018
	Undergraduate Open Scholarship	Apr. 2018
	Undergraduate Open Scholarship	Sept. 2017
	SFU-ZU Dual Degree Program Entrance Award	Sept. 2016