

RESEARCH INTEREST	My research interest is in the intersection of software system and artificial intelligence. I am especially interested in building systems to make machine learning scalable, reliable, and efficient. I am also passionate about designing AI-based method to solve system challenges.	
EDUCATION	University of Michigan (UM) , Ann Arbor, U.S. 2021-2023 (expected) <ul style="list-style-type: none"> • Bachelor of Science in Computer Science. • GPA: 4.0/4.0 Shanghai Jiao Tong University (SJTU) , Shanghai, China 2019–2023 (expected) <ul style="list-style-type: none"> • Bachelor of Science in Electrical and Computer Engineering • GPA: 3.76/4 (top 8%) 	
RESEARCH PROJECTS	Symbiotic Laboratory, UM 2022 Supervised by Fan Lai and professor Mosharaf Chowdhury <p>p.1 EvoFed: Tailoring Federated Learning for Heterogeneous Edge Devices via Model Transformation</p> <i>Building a FL system that enables model architecture transformation and model co-training to achieve better accuracy on clients with heterogeneous hardware and data.</i> <i>Role:</i> Leading	
	Michigan Intelligent Programming Laboratory, UM 2021-2022 Supervised by professor Xinyu Wang . <p>p.2 Testing SQL Queries using Lightweight Formal Methods</p> <i>Testing the equivalence of SQL queries using mutation-based constraint solving approach,</i> <i>Role:</i> Leading	
	<p>p.1 Optimizing SQL Queries using Synthesis Approach</p> <i>Optimizing the runtime performance of the whole SQL query using counterexample-guided inductive synthesis (CIGES) approach.</i> <i>Role:</i> Designing SQL query equivalence testing part for the CEGIS loop.	
	Intelligent Big Data System Laboratory, SJTU 2020-2021 Supervised by professor Jie Li . <p>p.2 An Energy-efficient Computing Offloading Framework for Blockchain-enabled Video Streaming Systems (Accepted at <i>Globecom22</i>)</p> Shijing Yuan, Jie Li, Yuxuan Zhu , Chentao Wu, Yue Ding. Accepted at <i>A Lyapunov design and evaluation for a video processing platform using the general Benders decomposition approach with an emphasis on adaptive compression and resource allocation.</i> <i>Role:</i> Formulating the problem, solving the problem, and experimenting.	
	<p>p.1 Sharding for Blockchain based Mobile Edge Computing System: A Deep Reinforcement Learning Approach (Accepted at <i>Globecom21</i>)</p> Shijing Yuan, Jie Li, Jinghao Liang, Yuxuan Zhu , Xiang Yu, Jianping Chen, Chentao Wu. <i>A sharding design and optimization for a blockchain based mobile edge computing system using deep reinforcement learning approach with an emphasis on security and efficiency.</i> <i>Role:</i> Running experiment and presenting the result.	

OTHER EXPERIENCE	• Research assistant at University of Michigan	2022
	• Grader of MATH 417 Matrix Algebra	2022
	• Microsoft Student Hackathon - Hack for Education (AI&ML) [<i>Winner</i>]	2021
	• The Interdisciplinary Contest in Modeling [<i>Final List Award</i>]	2021
	• School-enterprise Joint Creative Contest Organized by Media [<i>Grand Prize</i>]	2020
	• Winter program in St. Petersburg Polytechnic University	2019-2020
HONORS	• Dean's List.	Dec. 2021, Apr. 2022
	• University Honors.	Dec. 2021
	• Nominee for Tang Junyuan Scholarship.	Aug. 2021
	• Honorable Membership in Technology Department of Student Union of SJTU. May 2021	
	• Bronze Medal in University Physics Competition	Dec. 2020
	• Scholarship for Excellent Academic Performance.	Dec. 2020
	• Excellent Young Volunteer in admission activities of SJTU.	Sep. 2020
	• Honorable Mention by Judges in COVID-19 Challenges Competition.	Jul. 2020
TECHNICAL SKILLS	• <i>Programming:</i> C/C++, Python, SQL, Java, Lisp, Haskell, Verilog, Prolog, Golang.	
	• <i>Softwares:</i> MATLAB, Mathematica, PyCharm, IntelliJ, CLion, Git, Docker.	
	• <i>Knowledge Background:</i> Machine learning, Deep learning, Operating system, Network resource optimization, Operations, Blockchain, Lambda Calculus, Programming Languages, Discrete Mathematics, Linear Algebra, Probabilities, Distributed System.	
REFERENCES	Prof. Mosharaf Chowdhury Morris Wellman Associate Professor Electrical Engineering and Computer Science University of Michigan E-mail: mosharaf@umich.edu	
	Prof. Xinyu Wang Assistant Professor Electrical Engineering and Computer Science University of Michigan E-mail: xwangsd@umich.edu	
	Prof. Lingming Zhang Associate Professor Computer Science University of Illinois Urbana-Champaign E-mail: lingming@illinois.edu	