SHICHENG LIU

EDUCATION

Stanford University
Ph.D. in Computer Science — Jun. 2027 *(expected)*
Research interest: Natural Langauge Processing, Computer Systems, Programming Languages

The University of Chicago
(Honors) B.S. Computer Science *with a specialization in Computer Systems* — Jun. 2022
(Honors) B.S. Mathematics
Minor in Physics
Cumulative GPA: 3.985/4.000 (*summa cum laude*)

California Institute of Technology
Quarter-long Exchange. *Exchange major: Computer Science* — Sept. - Dec. 2021
Exchange GPA: 4.1/4.3

PUBLICATIONS

Refereed Conference Paper

SUQL: Conversational Search over Structured and Unstructured Data with Large Language Models
Shicheng Liu, Jialiang Xu, Wesley Tjangnaka, Sina J. Semnani, Chen Jie Yu, Monica S. Lam
Proceedings of the Findings of the North American Chapter of the Association for Computational Linguistics: NAACL 2024
Taught as course material at Stanford

Fine-tuned LLMs Know More, Hallucinate Less with Few-Shot Sequence-to-Sequence Semantic Parsing over Wikidata — EMNLP 2023
Silei Xu*, **Shicheng Liu***, Theo Culhane, Elizaveta Pertseva, Meng-Hsi Wu, Sina Semnani, Monica Lam
* denotes equal contribution
Proceedings of the 2023 Conference on Empirical Methods in Natural Language Processing
(Acceptance Rate: 23.3%, 901 out of 3,868)
Featured on Wikimedia Research Newsletter, December 2023
Taught as course material at Stanford

Automated Testing of Software that Uses Machine Learning APIs — ICSE 2022
Chengcheng Wan, **Shicheng Liu**, Sophie Xie, Yifan Liu, Henry Hoffmann, Michael Maire, Shan Lu
44th International Conference on Software Engineering, 2022
(Acceptance Rate: 26.2%, 197 out of 751)

Are Machine Learning Cloud APIs Used Correctly? — ICSE 2021
Chengcheng Wan, **Shicheng Liu**, Henry Hoffmann, Michael Maire, Shan Lu
43rd International Conference on Software Engineering, 2021
(Acceptance Rate: 22.4%, 138 out of 615)

SELECTED RESEARCH EXPERIENCE

Researcher   Jun. 2022 - Present
Stanford Open Virtual Assistant Lab, Department of Computer Science, Stanford University

Researcher   Jan. 2020 - Jun. 2022
Prof. Shan Lu Research Group, Department of Computer Science, The University of Chicago

Research Intern   Jun. 2019 - Oct. 2019
Laboratory for Space Research, The University of Hong Kong, China
(UChicago Jeff Metcalf Intern)

TECHNICAL SKILLS

Python, C, C++, Rust, SQL, R, Julia, Haskell, Standard ML, Racket, Java/Type script

SELECTED HONORS & AWARDS

Teachings

Top-5% of Stanford CS Course Assistants: Stanford CS224V   2023

Grants & Scholarships (while @ UChicago, listed here)

College Summer Research Fellow ($5,000 grant)   2021
College Research Fellow ($4,500 grant)   2020-2021
Soong Ching Ling Foundation Scholarship ($12,500 scholarship)   2020
Jeff Metcalf Summer Research Fellowship ($6,000 grant)   2019

Academic Honors

Graduated Summa Cum Laude, The University of Chicago   2022
Outstanding Undergraduate Researcher Award, Honorable Mention, CRA   2022

- CRA website notice
- Featured on UChicago CS News

Elected member of Phi Beta Kappa, the University of Chicago (the Beta chapter of Illinois)   2021
Enrico Fermi Scholar, The University of Chicago   2021
Robert Maynard Hutchins Scholar, The University of Chicago   2020
Dean's List, The University of Chicago   2018-2019, 2019-2020, 2020-2021

TEACHING EXPERIENCES

Stanford

Head Course Assistant for CS 224V Conversational Virtual Assistants with Deep Learning   Fall 2023

University of Chicago

Teaching Assistant for DATA 12000 Computer Science for Data Science   Spring 2022

Teaching Assistant for CMSC 27200 Theory of Algorithms   Winter 2022

Grader for CMSC 22100 Programming Languages   Spring 2021

Teaching Assistant for CMSC 15100 Introduction to Computer Science I   Winter 2021

RELEVANT COURSES

CMSC 16100	*(Honors)* Introduction to Computer Science I
CMSC 15200	Introduction to Computer Science II
CMSC 15400	Introduction to Computer System
CMSC 22100	Programming Languages
CMSC 23000	Operating Systems
CMSC 23010	Parallel Computing
CMSC 23500	Introduction to Database Systems
CMSC 25700	Natural Language Processing
CMSC 27100	Discrete Mathematics
CMSC 27200	Theory of Algorithms
CMSC 27410	*(Honors)* Combinatorics
CMSC 28000	Introduction to Formal Languages
CS 152	*(Caltech)* Introduction to Cryptography
CS/CNS 171	*(Caltech)* Computer Graphics Laboratory
CS 144	*(Stanford)* Introduction to Computer Networking
CS 256	*(Stanford)* Algorithmic Fairness
CS 261	*(Stanford)* Optimization and Algorithmic Paradigms
TTIC 31020	*(PhD-level course)* Introduction to Machine Learning
MATH 16x00	*(Honors)* Calculus I-II-III
MATH 20x10	*(Accelerated)* Analysis in $\mathbb{R}^n$ I-II-III
MATH 20250	Abstract Linear Algebra
MATH 23500	Markov Chains, Martingales, and Brownian Motion
MATH 25x00	*(Honors)* Basic Algebra I-II-III
MATH 26500	Introduction to Riemannian Geometry
MATH 27000	Basic Complex Variables
Ma 109A	*(Caltech)* Introduction to Geometry and Topology
Ma 116A	*(Caltech)* Mathematical Logic and Axiomatic Set Theory
PHYS 14100	*(Honors)* Mechanics
PHYS 14200	*(Honors)* Electricity & Magnetism
PHYS 14300	*(Honors)* Waves, Optics, & Heat
PHYS 15400	Modern Physics
PHYS 18500	Intermediate Mechanics
PHYS 23x00	Quantum Mechanics I-II

ACADEMIC REFERENCES

Prof. Monica S. Lam   lam@cs.stanford.edu
Kleiner Perkins, Mayfield, Sequoia Capital Professor of the School of Engineering , Department of Computer Science
Stanford University, Stanford, U.S.A.

Prof. Shan Lu   shanlu@uchicago.edu
Professor, Department of Computer Science
The University of Chicago, Chicago, U.S.A.

This CV is last updated on Mar. 20th, 2024