ASHKA SHAH

(650) · 862 · 5501 ⋄ shahashka@uchicago.edu

EDUCATION

University of Chicago *Exp Graduation: 2025*
Ph.D. in Computer Science

Harvey Mudd College *May 2016*
B.S. in Physics

Computer Skills Python, PyTorch, Tensorflow, C++
Research Interests AI for science, causal discovery, optimal experimental design, systems biology

RESEARCH EXPERIENCE

University of Chicago Fall 2019-current
Department of Computer Science *Chicago,IL*

Advisor: Rick Stevens

- Developed SP-GIES – a structure learner that achieves 4x speedup compared to existing algorithms. SP-GIES learns causal relationships of gene interaction networks using interventions and is written in Python and R. (GitHub link)

WORK EXPERIENCE

Lawrence Livermore National Laboratory June 2016 - Aug 2019
National Ignition Facility Computation Software Engineer *Livermore, CA*

Supervisor: Jarom Nelson

- Designed, developed and tested VBL (Virtual Beamline) laser propagation model of NIF laser system in C++ for use in high performance computing environments.

PAPERS AND PRESENTATIONS

Causal Discovery and Optimal Experimental Design for Genome-Scale Biological Network Recovery
PASC 2023 *Submitted paper*

Scaffold-Induced Molecular Subgraphs (SIMSG): Effective Graph Sampling Methods for High-Throughput Computational Drug Discovery
BMC Bioinformatics Supplement *April 2022*

Probing Decision Boundaries in Cancer Data Using Noise Injection and Counterfactual Analysis
Computational Approaches to Cancer Workshop at Supercomputing 2021 *Nov 2021*

IMPECCABLE: Integrated Modeling PipelinE for COVID Cure by Assessing Better LEads
ICPP '21: 50th International Conference on Parallel Processing, Lemont, IL *August 2021*

HONORS AND LEADERSHIP

Editor at ACM's Student Magazine XRDS 2021-2022
Secretary of Energy Achievement Honor Award Feb, 2021 (National Virtual Biotech Lab Team)
Graduate Women in Computer Science Co-Chair 2020-2022 (University of Chicago)
Crerar Fellowship 2019 (University of Chicago)