Stephen Huan

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Education

2021–present	**Undergraduate**, *Georgia Institute of Technology*, Atlanta, GA Bachelor of science in computer science, minor in mathematics, expected graduation 05/2024. ⭘ Courses taken: algorithms, machine learning, numerical linear algebra, analysis
2017–2021	**High School**, *Thomas Jefferson High School for Science and Technology*, Alexandria, VA

Experience

Florian Schäfer fall 2021–present	**Undergraduate researcher**, *School of Computational Science and Engineering*, Atlanta, GA Improve state of the art algorithms for sparse Cholesky factorization of dense covariance matrices by using ideas from optimal experimental design and compressive sensing. The resulting algorithm extends k-nearest neighbors to maximize conditional mutual information instead of proximity [1].
SURF summer 2023	**Research fellowship**, *California Institute of Technology*, Pasadena, CA Improved existing Gaussian process earthquake models by implementing new kernel functions and accelerating inference with sparse approximate Cholesky factors while advised by Houman Owhadi.
Algorithms spring 2023	**Teaching assistant**, *Georgia Institute of Technology*, Atlanta, GA Teaching assistant for the upper level undergraduate class Design & Analysis of Algorithms (CS 3510).

Papers

[1] S. Huan, J. Guinness, M. Katzfuss, H. Owhadi, and F. Schäfer, *Sparse Cholesky factorization by greedy conditional selection*, Jul. 2023. DOI: `10.48550/arXiv.2307.11648`. arXiv: `2307.11648` [cs, math, stat].

Awards

$1500, 2023-07	Georgia Tech's President's Undergraduate Research Award (PURA).
$1500, 2022-11	PURA Salary Award, turned down due to a conflict with teaching assistant.
$1000, 2022-08	PURA Travel Award to present at SIAM Conference Mathematics of Data Science (MDS22).
$150, 2022-04	2nd place poster in College of Computing at the Undergraduate Research Spring Symposium.

Talks

2022-10-07	Talk at the Algorithms, Combinatorics and Optimization student seminar at Georgia Tech.
2022-09-28	Talk at the SIAM Conference on Mathematics of Data Science (MDS22).
2022-04-12	Poster session at Georgia Tech's Undergraduate Research Spring Symposium.
2022-02-19	Lightning talk at the Georgia Scientific Computing Symposium.

Interests

Big O Theory Club fall 2022–present	Officer of Georgia Tech's official theoretical computer science club in the College of Computing. Responsibilities include preparing lectures, problem sets, and events for weekly meetings.
Rubik's cubing	7.76 seconds to solve a Rubik's cube and 11.54 seconds one-handed in official competitions.
Technical skills	Python, Julia, LaTeX, Nix/NixOS, Cython *decreasing familiarity*