Paul Tee

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Portfolio: https://my-personal-page-a5q4.vercel.app/
Github: https://github.com/jianhaoti

EDUCATION

University of Connecticut - Storrs, CT — Graduation: May 2026
M.S. Computer Science, Ph.D. Mathematics — GPA: **3.98**/4.0

McGill University - Montreal, Canada — May 2021
M.S. Mathematics — GPA: **4.0**/4.0

University of Texas at Austin - Austin, Texas — May 2019
B.S. Mathematics — GPA: **3.81**/4.0

SKILLS

- Languages: Python, Java, JavaScript, Typescript, Node.js, Express, HTML, CSS, Swift.
- Frameworks: React, SwiftUI, AVFoundation.
- Technologies: Git, Jest, Cypress, Postman, Figma, AWS.

WORK EXPERIENCE

Mathematical Researcher & Teaching Assistant — Sept 2019 – Present
University of Connecticut and McGill University

- Published two papers in high-impact journals, *Journal of Differential Geometry* and *Colloquium Mathematicum*.
- Won a combined $40,000 of research grants for geometric analysis at University of Connecticut with Lan-Hsuan Huang, and for topology at McGill University with Piotr Przytycki.
- Coordinated calculus and discrete math for over 500 concurrent students, and led 5 graduate teaching assistants.
- Mentored students in recitation with a 95% retention rate. Averaged 4.6/5 on teaching evaluations, and the average student passed with a grade of "B+".

Personal Tutor for Computer Science & Math — June 2019 – Present
Wyzant

- Conducted one-on-one tutoring sessions with upper level undergrad and graduate students in computer science and math courses. Boosted the student's grade by one letter grade on average. Maintained a 4.8/5 rating over 200+ sessions.

PROJECTS

Virtual Sampling Machine | *Swift, SwiftUI, AVFoundation* — July 2024 – Present
iOS Music Sampler

- Created a digital audio workstation that enables users to upload songs from their Apple Music Library and modify them with standard audio effects. Conducted in-depth research, compiling over 60 pages of documentation on audio signal processing libraries.
- Discovered and reported two bugs in Apple's decade-old audio processing library to Apple's support team. Apple is actively investigating the bugs.
- Prototyped UI with Figma and conducted user surveys to refine the experience, incorporating test-driven feedback for continuous improvement. Designed with neuromorphic principles to create a sleek, polished interface.

Graph Algorithms Visualization | *React, Typescript, JavaScript, Python* — Jan 2024 – May 2024
Full-stack web app

- Developed an innovative educational app, that pairs an algorithm's pseudocode with its visualization on a user-generated graph for a highly interactive learning experience.
- Built a responsive, user-friendly front-end with React, leveraging Material UI and Ant Design to create a modern, intuitive interface. Maintained high code quality with continuous unit testing using Jest.
- Built a RESTful API with Node.js and Express to handle graph data processing, executing Python scripts server-side and returning algorithm results in JSON format.

RELEVANT COURSEWORK

- Machine Learning, Cryptography, Quantum Computing, Probability, Statistics, Data Structures and Algorithms Graph Theory, Linear Algebra, Discrete Math.