

SAKURA TAKAHASHI

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EDUCATION

University of Hawaii at Manoa

B.S. Mathematics; *Minor in Computer Science*

Honolulu, HI

Expected Graduation: May 2026

WORK EXPERIENCE

University of Hawaii at Manoa

Aug '24 - present

Math Learning Assistant

- Provided one-on-one and group tutoring to college students in pre-calculus & single variable calculus on concepts and arithmetic
- Created supplementary materials such as exams to support student learning outside of sessions

Palolo Factory

Dec '21 - Dec '23

Co-owner

- Managed finances of family owned musubi pop-up events and negotiated with various vendors
- Organized and planned events, including venue selection, setup, and social media marketing efforts

RESEARCH & INTERN EXPERIENCE

Majesco Math Research

Jan '25 - now

Math Research Assistant

- Used LEAN V4 and Mathlib to code mathematical proofs from the Journal of Logic and Analysis, to be added as formal marginalia for an article published in *Marginis* under Professor Bjoern Kjos-Hanssen

Mechanical Engineering Lab at UH Manoa

Jan '25 - now

Undergraduate Research Student

- Used JAX MD and JAX with Python to optimize auto-differentiating algorithms for binding energy landscapes with respect to handshake magnetic dipoles under Professor Chrisy Xu Du.

Urban Land Institute

Summer '22

Institute Scholar

- Collaborated with fellow participants and experts on urban development projects on low-income housing in Oahu
- Presented proposals in front of local lawmakers and industry executives

PROJECTS

Optimal Pathing and Topological Data Analysis for City Bus

Aug '24 - present

Undergraduate Researcher/Creator

- Aims to address service issues of the bus system in Oahu by investigating topological data analysis (TDA) and control theory can be applied to optimize networks
- Designed Python algorithms to intake TheBus API data into matrices for TDA
- Constructed mathematical models for optimization functionals

LEADERSHIP & INVOLVEMENTS

Natural Sciences Student Ambassador Club

Aug '24 - present

Student Ambassador

Mathematics Club

Aug '23 - present

Co-president

SKILLS

Technical Skills

Computer & Software Languages & Libraries/Packages

- Java, Python, Matplotlib, Gephi, pandas, Microsoft Office Suite (Excel, Word, & PowerPoint), Adobe Creative Suite, LEAN, MATLAB, AutoCAD

Other Experience

- Mathematical Modeling, Data Analysis, Object-Oriented Programming, Financing, Discrete Math, POS systems, Project Management

Interpersonal Skills

Languages

- English (Fluent), Japanese (Conversational)