HAILEY HO

MATHEMATICS AND COMPUTATIONAL ANALYSIS

UMass Amherst | haileyho1905@gmail.com | 781-606-7561

TECHNICAL SKILLS

- Programming: Python (pandas, NumPy), R, SQL, Java, C
- Data Analysis: Statistical Analysis, Data Cleaning, Exploratory Data Analysis, Linear Regression, Cluster Analysis, Outlier Detection
- Other: Data Visualization, Mathematical Modeling, Microsoft Excel

EDUCATION

Feb 2024 - Aug 2026

UMass Amherst

BS In Mathematics with a Concentration in Computation

- Graduated in 2.5 years
- Relevant Courses: Calculus Sequence, Statistics, Object Oriented Programming, Mathematical Modeling, Scientific Computing, Human Computer Interaction, Data Structures, Algorithms

PROJECTS

UMass CICS Undergraduate Research Volunteer — **May 2024 - Aug 2024**

- Collaborated with four undergraduate researchers and a PhD mentor to investigate the computational complexity of the linear separability problem
- Designed and implemented an algorithm in Python to solve the linear separability problem
- Synthesized research methodology and findings into an academic poste

Mathematical Models - MATH 456 — **Sep 2025 - Dec 2025**

- Collaborated with a six-person team to develop mathematical models for six datasets using R.
- Applied statistical methods, including linear regression, cluster analysis, and outlier detection, to identify patterns and analyze data.
- Documented analytical findings and presented results, communicating statistical insights and modeling outcomes

GET Laundry Redesign - CompSci 325 — **Feb 2026 - May 2026**

- Collaborated with a four-person team to evaluate and improve a digital laundry service experience.
- Collected and analyzed user feedback through surveys, interviews, and cognitive walkthroughs.
- Developed a prototype incorporating a scheduling heatmap and additional payment options based on identified user needs.

PROFESSIONAL EXPERIENCE

Freelance Tutor, Math and Piano — **Jul 2021 - Present**

- Developed individualized mathematics instruction covering pre-algebra through calculus, adapting explanations to student needs.
- Break down complex mathematical concepts into structured, accessible lessons.
- Built and maintained an independent tutoring practice through social media outreach and referrals.

Communications Intern, Back from the Brink Western Mass — **Jun 2025 - Feb 2026**

- Designed and developed an organizational website to communicate initiatives and advocacy efforts.
- Authored biweekly newsletters featuring organizational updates, opinion pieces, and upcoming events.
- Supported communications strategy through research, content development, and information synthesis.

VOLUNTEERING

SPOCs for Gaza - Intro to AI Agents Head TA — **May 2026 - Oct 2026**

- Coordinated 15 teaching assistants supporting 40 displaced students in a remote AI education program.
- Developed course curriculum using Michigan State University's CSE 491 instructional materials.
- Provided technical and administrative support to facilitate course delivery

Longwing Community Relief — **Jan 2026 - Present**

- Organized weekly fundraising events generating approximately $200 per week for displaced families.
- Coordinated 20 volunteers and managed fundraising finances using Microsoft Excel.