

SEEHANAH TANG

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EDUCATION

Brown University

Sc.B. in Applied Math-Computer Science [GPA: 4.00/4.00]

Graduating in May 2025

RELEVANT COURSES

Machine Learning (CSCI 1420)	Computer Vision (CSCI 1430)
Theory of Computation (BMEVISZA 081)	Graph Theory (BMEVISZA 086)
Numerical Optimization (APMA 1160)	OR: Probabilistic & Deterministic models (APMA 1200/1210)
Statistical Inference (APMA 1655)	Ordinary & Partial Difference Equations (APMA 0350/0360)
Real Analysis (MATH 1630)	Design and Analysis of Algorithms (CSCI 1570)

RESEARCH AND INDUSTRY EXPERIENCE

Brown University School of Public Health

Honors Thesis Candidate with Prof. Alice Paul

Sept 2024 - Present

Providence, RI

- Conducted a comparative study on risk score models, including FasterRisk and RiskCD, focusing on optimizing patient outcome predictions, and utilized machine learning techniques to categorize continuous variables for improved model performance
- Designed and executed a simulation study to evaluate computational efficiency and accuracy between the models, validated models with real-world data on tuberculosis diagnosis and treatment adherence to assess clinical applicability and model reliability

MIT Sloan School of Management

Research Assistant for Prof. Dimitris Bertsimas

Jul 2020 - Aug 2024

Cambridge, MA

- Led the development of machine learning models using Julia and Python to predict tumor recurrence and optimize treatment strategies for cancers such as IPMN, GIST, CRLM, and soft tissue sarcoma
- Focused on creating interpretable AI models to assist in clinical decision-making, ensuring that the models provide actionable insights for personalized cancer treatments
- Co-author in three peer-reviewed publications in top-tier journals, JAMA Surgery and Lancet Oncology, advancing the application of AI in precision oncology

The Cigna Group

Technology Development Intern

May - Aug 2024

Philadelphia, PA

- Engineered a serverless customer service chatbot and forums app in AWS, utilizing GPT-4 and Retrieval-Augmented Generation (RAG) techniques to enable accurate responses to domain-specific queries
- Incorporated automated testing into pipeline of requester dashboard for Cigna Primary Care Providers (PCP) using Cypress Studio

Benefits Science, MultiPlan

Data Science Intern

Jun - Aug 2023

Boston, MA

- Utilized Databricks and Spark to efficiently process and analyze medical claims data related to hypertension and chronic kidney disease (CKD), implementing data queuing and filtering techniques
- Developed classification models to assess cost-related risk scores for individuals with hypertension and CKD
- Crafted an accessible and user-friendly interface for predictive models on the company's dashboard using React framework Next.js

PUBLICATIONS

“Using Artificial Intelligence to Find the Optimal Margin Width in Hepatectomy for Colorectal Cancer Liver Metastases” with Dimitris Bertsimas, Georgios Antonios Margonis, Suleeporn Sujichantararat, Yu Ma.

“An interpretable AI model for recurrence prediction after surgery in gastrointestinal stromal tumour: an observational cohort study” with Dimitris Bertsimas, Georgios Antonios Margonis, Angelos Koulouras.

“Interpretable artificial intelligence to optimise use of imatinib after resection in patients with localised gastrointestinal stromal tumours: an observational cohort study” with Dimitris Bertsimas, Georgios Antonios Margonis, Suleeporn Sujichantararat, Yu Ma.

LEADERSHIP AND COMMUNITY ENGAGEMENT

The Branch Christian Fellowship

Outreach Chair

Sept 2021 - Present

Providence, RI

- Organized multiple campus-wide outreach initiatives and led weekly prayer sessions for University students, fostering a supportive community and spiritual growth
- Volunteered at local churches, serving meals to the homeless in Providence and providing care in the nursery

Brown University Orchestra

First Flutist

Sept 2021 - Present

Providence, RI

- Performed regularly for the Brown University and greater Providence communities, including special programs addressing current events, leading sectionals, and participating in composer and artist workshops
- Collaborated alongside world-renowned violinist Itzhak Perlman and acclaimed cellist Zlatomir Fung, showcasing technical proficiency, adaptability, and artistry across diverse orchestral repertoires

The Association of Women in Mathematics (AWM)

Secretary

Sept 2021 - May 2023

Providence, RI

- Efficiently managed administrative tasks, including note-taking during E-Board meetings and drafting emails and announcements
- Led successful initiatives, organizing engaging panels, community events, and mentorship programs, attracting up to 100 participants and fostered the community of women in mathematics at Brown University

TEACHING EXPERIENCE

Brown University

Teaching Assistant for Partial Differential Equations, Statistical Inference, and Object-Oriented Programming

Jan 2022 - Dec 2023

Conducted informative weekly office hours, providing support to students in comprehending math projects and course materials

Evaluated student performance and graded homework and exams, while also working on course website

SKILLS AND LANGUAGES

Technologies: Proficient in Python, Java, JavaScript, Julia, Git; Experience with C, MatLab, SQL, AWS, Spark, R

Languages: Native proficiency in English, Chinese; Elementary proficiency in Spanish, Hungarian, ASL