ZHAN SHI

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EDUCATION

University of Michigan, Ann Arbor *Sep 2023 - present*
MS in Computer Science, GPA: (N/A)

Seminole State College of Florida *May 2021 - August 2021*
Non-degree course work, summer school, GPA: (3.67/4.0)

University of Michigan, Ann Arbor *Sep 2020 - April 2023*
BS in Computer Science, Double Major: Mathematical Science
Transferred from CFAU, GPA: (3.81/4.0)

University of California, Berkeley Extension (exchange program) *Sep 2019 - May 2020*
GPA: (3.82/4.0)

China Foreign Affairs University *Sep 2017 - May 2020*
Major: English Translation
GPA: (3.72/4.0)

PUBLICATIONS

Zhan Shi: Robust Learning using Globalized Robust Counterpart, (on going)

Zhan Shi: Approximation Ratio of ATSP under Singleton Assumption, (on going)

RESEARCH EXPERIENCE

Stable Learning Research Advisor: Peter Zhang (CMU)
August 2023 - present *Remote Research*

· Read extensively into the literature of adversarial/robust learning, including how to achieve robustness using theory of differential privacy (paper link) and how to attack a model (paper link)
· Learned differential privacy theory and convex optimization using these online resources (link 1, link 2)

Aproximation Algorithms Research Advisor: Euiwoong Lee
June 2023 - present *University of Michigan*

· Took a deep look into the most recent developments of approximation algorithms for Asymmetric Travel Salesman Problem (paper link)

Price of Simplicity Research Advisor: John Silberholz
May 2022 - June 2022 *University of Michigan*

· Read through Silberholz's working paper, *The Price of Simplicity in Personalized Screening Policies*, which discusses the benefit of using decision tree model compared to perfect personalization in designing health screening strategies for patients
· Wrote a program that computes the decision tree predicting the best screening strategies under simplified assumptions
· Found that under such assumption, the final decision tree splits the preference level space evenly

Coding Theory Research Advisor: Mahdi Cheraghchi
June 2022 - August 2022 *University of Michigan*

· Learned coding theory using these resources (link 1, link 2)
· Read Zeev Dvir's paper on linear data stucture and figured out the relationship between rank and rigidity of a matrix paper link

Multidisciplinary Design Program Statistics Online Computational Resource Lab
January 2022 - December 2022 *University of Michigan*

· Developed two Rshiny web application Air Quality Project and Digital Cage Project
· The first project plots PM25 concentration according the input zipcode and compute corresponding Air Quality Index
· The second project retrieves frequency of mouse hitting sensors in cage for an experimental data

TEACHING EXPERIENCE

Grader EECS 572: Randomness and Computation
September 2022 - December 2022 *University of Michigan*

· Grade students' homework and midterm exams on Gradescope and respond to regrade request

Academic Intern EECS 70: Discrete Mathematics and Probability Theory
June 2020 - August 2020 *University of California, Berkeley*

· Help teaching assistant arranging breakout rooms during discussion section
· Respond to students' questions on homework in office hours

TECHNICAL STRENGTHS & ACTIVITIES

Programming Java, Python, C/C++, HTML, Latex
Language Japanese, Chinese, English

Piano Performance Advisor:Xiting Yang, DMA; ShunFu Chang, DMA
Jannary 2023 - present *University of Michigan, School of Music*

· Interested in Animenz's arrangment of animation music
· Performed in Xiting Yang's student Recital at 07/29/2023 (video link)