YUWEI BAO

New Orleans, LA 70118 ♦ ybao2@tulane.edu

EDUCATION

Doctor of Philosophy: Mathematics (Statistics), Expected in 2025

Tulane University - New Orleans, Louisiana

- GPA: 3.83/4.00

Bachelor of Science (Honors): Mathematics, Computer Science, 05/2020

McMurry University - Abilene, TX

- Magna Cum Laude
- GPA: 3.77/4.00 (Math GPA: 4.00/4.00 and Computer Science GPA: 3.81/4.00)
- Awarded Ginny Carlson Memorial Award as Outstanding Female Graduating Senior of Class of 2020
- The Dean's List: 2016-2020
- Honor Thesis: Simulation using regression and noise
- Member of Texas Iota Chapter of Kappa Mu Epsilon, National Mathematics Honor Society
- Member of Omicron Delta Chapter of Alpha Phi Omega, National Service Fraternity

EXPERIENCES

Research Assistant, 05/2022 to Current

Tulane University – New Orleans, Louisiana

- Construction of coalescent model in a Bayesian phylogenetics framework
- Drosophila Bulk DNA data analysis
- Mentors: Dr. Xiang Ji and Dr. Wu-Min Deng

Teaching Assistant, 08/2020 to 08/2022

Tulane University – New Orleans, Louisiana

- Assisted with undergraduate Long Calculus I, Calculus I & II, and Statistics.
- Taught weekly recitations to supplement professor's presentations.
- Hosted office hours to answer students' questions.
- Wrote quiz rubrics, graded quizzes and exams.

Student Writer, 01/2018 to 05/2020

War Hawks Herald Newspaper, McMurry University – Abilene, Texas

- Published thirty articles in McMurry War Hawks Herald school newspaper covering events students are involved. Some articles can be accessed through: https://blogs.mcm.edu/herald/

Student Math Tutor-CRLA Level I Certified Tutor, 10/2017 to 05/2020
McMurry University – Abilene, Texas

- Tutored Intermediate Algebra, College Algebra, Pre-Calculus, Calculus I, Calculus II, Linear Algebra, Statistics, Nursing Chemistry I, and some intro level Computer Science classes.

Summer Undergraduate Researcher, 06/2019 to 07/2019 and 07/2018 - 08/2018
McMurry University – Abilene, TX

- Did computational chemistry research which focuses on docking studies and analysis over HDAC inhibitors as anti-cancer therapeutic.
- Mentors: Dr. Paul Pyenta & Dr. Hyunshun Shin

PROJECTS

1. Scientific Computations II Class: Techniques for High Accuracy Integration. Collaborated with Kendall Gibson on examining two different ways to increase the order of accuracy of the trapezoid rule and Simpson's rule involving Taylor expansions and IMT transformation. Mentor: Dr. Ricardo Cortez
2. Epidemic Modeling Study Class: Collaborated with others on the projects (1) Creating a Framework for Understanding the Simple Covid-19 Multi-compartmental Model. (2) Examining the Effects of Vaccinations and Behavior Changes Towards Covid-19 Pandemic in New Orleans. Mentor: Dr. James Mac Hyman
3. GSMMC at University of Delaware: Collaborated with others on the project: Mathematical Models and Simulations of Reconfigurable Flow Networks: Erosion, Deposition, Filtration, and Growth. Mentor: Dr. Pejman Sanaei