TIANYU (TERRY) ZHANG

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EDUCATION

The University of Texas at Austin — Bachelor of Science in Mechanical Engineering — May 2025
Austin, Texas
Minor: Computer Science
Overall GPA: 3.8

Relevant Coursework: Mechatronics, Heat Transfer, Machine Elements, Thermodynamics, Fluid Dynamics, Dynamic Systems and Controls, Solids, Engineering Statistics and Finance, Data Structures and Algorithms

Skills: SolidWorks, Google Cloud Database, Python, MATLAB, Java, JavaScript, UNIX, HTML, CSS, SQL, Swift

EXPERIENCE

Texas A&M University - *Undergraduate Research Assistant;* College Station, TX — August 2021 - May 2022

- Worked 10 hours weekly in a chemistry lab researching how specific nanoparticles affect wastewater filtration
- Designed a system for crossflow filtration using a peristaltic pump for testing of membranes made in the lab
- Conducted electrospinning experiments to synthesize lignin membranes with graphene oxide nanoparticles

SpiderSmart Learning Center - *Algebra 2 Tutor;* Remote — January 2022 - August 2022

- Prepared custom algebra 2 lessons for 10 students resulting in all students achieving 90+ points in the course
- Formatted weekly problem sets through Latex and assessed each student's individual homework performance
- Tracked each student's progress using spreadsheets to identify strengths and areas needing improvement

PROJECTS

ME 366J Design Methodology - Automated Plant Care Taker — August 2024 - December 2024

- Partnered with a team of 4 to brainstorm, design, and manufacture an automated home plant care system
- Documented customer needs, DFM, DFA, along with other design principles in a detailed 35-page report
- Programmed a bluetooth arduino and an iOS app for real time data monitoring and control of pump and lights

ME 338 Machine Elements - *Collaborative RC Car Build* — July 2024 - August 2024

- Collaborated with a team of 2 to build a radio controlled car given a battery, controller, receiver, and motor
- Developed a scaled down Ackerman steering bracket and modeled the assembly in SolidWorks for 3D printing
- Conducted design of experiments, optimizing turning radius and top speed, giving 25% reduction in lap times

CS 329E Data Analytics - *Data Analyst* — August 2024

- Utilized SVM modeling to analyze a student database, aiming to predict grades from factors outside of school
- Processed and cleaned a dataset of 2313 students using pandas, ensuring data provides accurate analysis
- Performed feature engineering to identify predictors like parental support, improving model performance to 83%

LEADERSHIP AND ACTIVITIES

Student Engineers Educating Kids (SEEK) - *VP Internal Relations, Program Officer* — August 2022 - May 2025

- Introduced STEM concepts to elementary students through 10 different engineering projects every semester
- Led 20 mentors to demonstrate an engineering project for kids effectively and efficiently over a 12 week period
- Created a mechanical engineering project for students aged 6-14 by using real world examples and analogies
- Planned biweekly social and sport events for over 200 members fostering greater participation and networking

Texas Men's Club Volleyball - Libero — January 2024 - May 2025

- Committed 4.5 hours per week to rigorous training and 4 weekends to full day tournaments each season
- Developed leadership skills by coordinating defensive plays and supporting teammates on and off the court

Filipino Student Association - Pamilya Head — January 2023 - May 2025t

- Mentored and fostered an inclusive environment for 9 freshmen, providing guidance and cultural engagement
- Competed in the Texas-wide "Goodphil" tournament, representing the organization in various sports and dance

ADDITIONAL INFORMATION

Languages: Fluent in English and Conversational Mandarin Chinese
Interests: Volleyball, Cooking, Baking, Flute, Guitar, Piano, Aviation
Work Eligibility: Eligible to work in the U.S. with no restrictions