Terry Cao

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EDUCATION

Georgia Institute of Technology   Atlanta, GA
Bachelor of Science, Mechanical Engineering, *GPA: 3.4*   Aug 2022 - Aug 2025

EXPERIENCE

Tech Rec   Atlanta, Georgia
Tech Rec Attendant   Jun 2023 - Aug 2023
- Processed hundreds of customer transactions weekly with accuracy and efficiency, contributing to consistent revenue flow.
- Performed preventative maintenance and minor repairs on equipment, reducing downtime and service requests by 15%.

University of North Georgia   Gainesville, Georgia
Peer Math Tutor   Jan 2022 - May 2022
- Maintained a friendly and open environment that encouraged students' collaboration while ensuring individualized support.
- Assisted 20+ students in applying mathematical principles to real-world engineering problems, reinforcing critical thinking and analytical reasoning skills, ranging from college algebra to Calculus II.

PROJECT EXPERIENCE

Design Engineer: Capstone Project   Atlanta, Georgia
Design and prototyping an adaptive power tool for impaired dexterity users.   Jan 2025 – May 2025
- Designed and prototyped an adaptive power tool for users with tenodesis grasp, managing a $1,000 budget to maximize accessibility and ergonomics specified by the sponsor and needs of end-users.
- Conducted DRBFM-style reviews during weekly team meetings to assess design risks and failure modes, identifying 6+ failure modes and mitigating risks prior to prototyping.
- Engineered and CAD-modeled using SolidWorks the tear-away strap, reducing potential user injury risk by 20%, and remediating second-highest failure mode of the product.
- Authored engineering reports with cost–benefit analyses, ergonomic justifications, and design schematics, influencing final design adoption and saving 30% of the budget.
- Developed a MATLAB gear ratio model for a 3-stage planetary gear train, cutting gear ratio design time by 50% compared to manual calculations and improving torque and RPM predictions.
- Collaborated with project sponsors through weekly design review meetings, gathering feedback to refine ergonomics and functionality, which led to a 25% improvement in user satisfaction metrics during prototype testing.

Simulation Model Engineer: Fluid Airfoil Simulation Project   Atlanta, Georgia
Simulation of Fluid Dynamics over an Airfoil to determine characteristics   Apr 2024 – May 2024
- Applied CFD simulations in OpenFOAM to analyze and improve aerodynamic profiles of airfoils for performance.
- Reduced drag coefficient by 15% through iterative geometry refinements and turbulence modeling.
- Validated simulations with wind tunnel data, achieving 95% accuracy between controlled and simulated results.

Mechanical System Engineer: ME 2110 Competition   Atlanta, Georgia
Robot Design Hackathon Competition   Aug 2023 – Nov 2023
- Led a team of 4 in designing and fabricating a fully functional robot, using SolidWorks for mechanical analysis and system integration.
- Fabricated components via bandsaw, laser cutting, 3D printing, and machining, meeting tight 10-week deadlines while adhering to safety standards and restrictive design criterion.
- Conducted real-time troubleshooting and iterative prototyping, reducing mechanical failures by 25% through systematic testing.

INVOLVEMENT EXPERIENCE

American Society of Mechanical Engineers
Volunteer Board Member   Aug 2023 – May 2024
- Collaborated with industry professionals to host a fair, providing networking opportunities for over 100 students.

Vietnamese Student Association
General Member & Mentor   Aug 2022 – May 2025
- Mentored 10+ first-year students, helping integrate academically and socially, resulting in higher member retention year-over-year.

ADDITIONAL INFO

Skills: 3D Printing, Laser-cutting, Microcontroller, Team-Planning, Interpersonal Skills, Customer Service, Prototyping, Technical-Writing
Software: Python, C++, MATLAB, SolidWorks, AutoCAD, Excel, PowerPoint, Word, DaVinci Resolve, Photoshop
Certification: GeorgiaBEST Work Certification.