

Natalie Rice

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EDUCATION

Bachelor of Science: Mechanical Engineering, Manufacturing & Design Track | Business Minor 05/2027
The University of Texas at Austin | GPA: 3.90/4.00 | University Honors

WORK EXPERIENCE

Founder, Longhorn Tutors 09/2020 – Present

- Teach STEM subjects to students ranging from kindergarten through college, with 90% of students earning A's each semester
- Market services and coordinate schedules with students, parents, and other tutors
- Advise and manage 3 tutors with 100% retention for 3 years

Research Assistant, Marras Research Group 06/2026 – Present

- Developing and launching a Python pipeline to convert DNA origami PDB files into 3D-printable STL files, processing 38,000+ atomic coordinates across 200+ molecular models to support multiple geometries and reduce manual parameter adjustment
- Iterated through multiple design and print cycles to resolve geometry, flatness, and adhesion issues across 10 distinct molecular structures, achieving a successful final print

Outdoor Center Supervisor and Adventure Trip Guide, Gregory Gym 08/2026 – Present

- Lead adventure trips by coordinating logistics, equipment, transportation, participant safety, and real-time risk management
- Execute daily operations, including equipment rentals, inventory management, customer service, and staff support

Intern, Rimkus Engineering Consulting Group Inc. 06/2023 – 09/2023, 06/2026 – 08/2026

- Assisted forensic engineers with field investigations involving water damage and mechanical system failures, documenting observations and supporting root-cause analyses
- Analyzed 900+ engineering consultant résumés and developed a standardized database to classify technical expertise, licensure, certifications, and project experience, streamlining project staffing and proposal development
- Produced 12 weekly environmental science newsletters distributed to Rimkus affiliates and stakeholders to maintain brand visibility and client engagement

Research Assistant, Dr. Tilton BioMATTER Lab 10/2023 – 09/2024

- Developed and executed a team research plan to characterize age-related degeneration in musculoskeletal tissue and bone
- Performed imaging and stress-strain analysis of dissected biomaterials to evaluate degeneration mechanisms
- Bio 3D-printed gelatin methacrylate scaffolds to advance minimally invasive treatment for degenerative musculoskeletal conditions
- Created experimental schematics in BioRender to support lab documentation and manuscript preparation

Bookkeeper, JNL Real Estate LP 06/2021 – 09/2023

- Managed the accounting for 8 mobile home parks
- Maintained rent rolls, calculated utility charges, invoiced tenants, monitored expenses, paid vendors, booked payments, reconciled bank accounts, and prepared monthly financial reports for management

ACADEMIC EXPERIENCE

Projects 08/2023 – Present

- Led the redesign of an RC car for tractor-pull, acceleration, turning agility, and varied terrain performance by optimizing gear ratios, traction, and structural load, supported by FEA and machine element calculations. Redesign pulled 30% greater load.
- Manufactured components using milling and lathe operations, applying proper tool selection and tolerances
- Collaborated in labs to execute electrical circuit designs, fluid simulations, material analysis, and thermal processes
- Designed a wind-powered AC-to-DC circuit with an Arduino logic controller and a 5-tier LED speed indicator
- 3D printed prototypes created in SolidWorks, including fan blades, motor stand, gears, and fitted components
- Presented project proposals and marketing plans for drone surveillance, pens for reduced dexterity, and tutoring

McCombs Summer Institute Business Minor, UT Austin 06/2025 – 07/2025

- Completed 5 courses, including Accounting, Finance, Business Law and Ethics, Management, and Marketing
- Collaborated with peers to present financial investment strategies and management evaluations

SKILLS

Technical Skills: machine shop certified, milling, CAD, FEA, Java, MATLAB, Excel, Fusion 360, 3D-printing, laser cutting, circuit design, stress/strain analysis, hardness testing, cryosectioning, wind tunnel simulation, dye flow visualization, Claude Code, Python

Tools: Bamboo Lab 3D-printer, (Bio)3D-printer, Pavone Optics 11, qPCR, autoclave, centrifuge, pipettes, Rent Manager

Soft Skills: teamwork, persistence, curiosity, leadership, detail-oriented, basic Spanish

HONORS AND ACTIVITIES

University Honors (2023–Present), Halliburton Scholar (2025), Texas Infinites Spirit & Social Org. Officer, Alpha Xi Delta Sorority member, Texas Triathlon & Cycling member, Austin Marathon (2026), Galveston Ironman 70.3 (2023), Expert Skier, Mountaineer