

James Utton

(505) 660-2385 • Salt Lake City, UT • jago.utton@gmail.com • linkedin.com/in/James-Utton

EDUCATION

University of Utah | Salt Lake City

Expected Graduation May 2027

- Honors Mechanical Engineering & Physics
- GPA: 3.90 (Dean's List x4)
- **Relevant Coursework:** Statistics, Mechanics of Materials, Statics, Thermodynamics, PDE's, Dynamics, Numerical Methods
- **Activities:** Tennis Club (Treasurer), Formula SAE (Vehicle design and Testing), College of Science Student Council

EXPERIENCE

Research Fellow – REU Program

September 2024 - Present

University of Utah | Salt Lake City, UT

- Conducted research on the mechanical behavior of organic trabeculae in the brain and skull, contributing to the design of bio-inspired systems for soft-tissue support
- Selected for the College of Engineering's REU program to lead design iteration and testing across 150+ experimental configurations
- Developed custom MATLAB tools for video-based displacement tracking and integrated data into over 30 finite element (FE) models
- Designed and validated experimental setups to map strain distribution under varying loading conditions, improving model accuracy and physical testing correlation
- Collaborated with engineers and researchers to bridge CAD design, prototyping, and computational modeling in a fast-paced biomedical research environment
- Selected to present research findings at the 2025 SB3C Conference, highlighting advancements in strain mapping and model validation for organic brain structures

Learning Assistant – Chemistry Department

January 2025 – May 2025

University of Utah | Salt Lake City, UT

- Supporting students in understanding fundamental chemistry concepts through group discussion and problem-solving sessions
- Collaborating with faculty to enhance student engagement and learning outcomes in introductory chemistry courses
- Initiated the creation of additional study resources to improve comprehension of challenging topics.

PANDA Mentor – Physics Department

January 2025 – May 2025

University of Utah | Salt Lake City, UT

- Providing paid mentorship to physics students, offering guidance on coursework, research, and career development
- Facilitating academic success by hosting one-on-one and group mentoring sessions tailored to individual needs
- Assisted in organizing workshops and networking events to support student growth and professional opportunities

Adobe Construction

June 2019 – August 2023

Mousehole Construction LLC | Santa Fe, NM

- Led the construction of two adobe structures in the historic district of Santa Fe, laying over 5,000 adobes and assisting in traditional roofing techniques, including installing vigas and latillas.
- Contributed to stone edging, landscaping, and the preservation of Santa Fe's architectural heritage.

LEADERSHIP & SERVICE

ASUU Assembly Member – College of Engineering | Elected May 2025

- Represent student interests in the university's legislative body; contribute to college policy decisions

Volunteer Tutor, Bud Bailey

- Tutored young children in math/science, boosting understanding and confidence
- Provided mentorship to improve students' academic performance and built strong foundational knowledge in STEM subjects.

Vice-Chair - USAC, University of Utah

- Represent student interests in curriculum and faculty feedback, serving as the second-in-command of the council
- Lead initiatives to improve student experience with the college of science.

Bench to Bedside

- Collaborated with a multidisciplinary team to develop medical solutions from research to prototype testing

SKILLS

- **Technical Skills:** CAD Design (SolidWorks - CSWA Certified, Fusion 360), Prototyping (3D printing, machining, hardware fabrication), MATLAB, Python, Arduino C, Video Processing, Biomechanical Modeling (FeBio), Testing (strain/displacement analysis, mechanical systems)
- **Soft Skills:** Technical communication, interdisciplinary collaboration, project leadership, mentoring
- **Engineering Interests:** Surgical devices, mechanical design, medical imaging, biomechanics, manufacturing processes
- **Personal Interests:** Climbing, Hiking, Mountain Biking, Skiing, Tennis, Baseball, Photography, Digital Art