Audrey Wiebe

Los Angeles, CA | (661) 331-9489 | awiebe@usc.edu | audreywiebe.github.io/portfolio/ | linkedin.com/in/audreywiebe/

EDUCATION

University of Southern California, Viterbi School of Engineering May 2028
Bachelor of Science, Astronautical Engineering, Minor in Entrepreneurship GPA: 3.85/4.00

Relevant Coursework: Introduction to Astronautics, Advanced Programming in Python, Calculus III, Differential Equations, Statics, Materials Science, Physics: Mechanics and Thermodynamics & Electricity and Magnetism, Technology Entrepreneurship

SKILLS

Python, SQL, MATLAB, Agile SDLC Methodologies, Microsoft Excel, Multisim, GitHub, IoT Device Configuration, Remote Sensing, iOS Development, Smart Device Circuits, Team Collaboration, Leadership, Research, Innovation, OSHA 10 Certified

PROFESSIONAL EXPERIENCE

Wireless Devices and Systems Lab (WiDeS) Los Angeles, CA
Undergraduate Research Fellow September 2025 - Present

- Dedicate 7+ hours of weekly research to wireless communication systems integration, networking, and cross-layer design
- Maintain communication with graduate researchers and lab faculty in preparation for comprehensive research presentation

Rain for Rent Bakersfield, CA
Research and Development Engineering Intern May 2025 - August 2025

- Conducted 10+ hours of weekly research surrounding Bluetooth Low Energy, LoRaWAN, and Wirepas wireless technologies
- Tested 5+ new products weekly, documenting over-the-air configuration, gateway connectivity, and data to application server
- Collaborated with IoT team to deploy 15+ API integrations, displaying all remote data on AWS internal application server
- Deployed wireless water pump & tank monitoring system using an AWS network to improve remote data collection by 70%
- Developed self-updating IoT intelligence feed using Python & Microsoft Power Automate to reduce manual research by 80%

PROJECTS

Boeing Freshman Design Challenge March 2025

- Engineered an asteroid sample return mission concept in collaboration with three peers, integrating advanced collection techniques through extensively researching previous missions, battery storage, and power generation methods
- Optimized key mission parameters, decreasing duration by over 50% and allowing return of a 20 kg asteroid sample
- Illustrated spacecraft design, incorporating a robotic arm and specialized landing gear for anchoring and material collection
- Showcased feasibility through a data-driven presentation, earning third place in competitive evaluation by Boeing engineers

OrbiClear Space Debris Removal October 2024 - December 2024

- Co-founded OrbiClear, theoretical space debris removal company, in collaboration with three undergraduate peers
- Led the creation of a launchable, satellite-based system that utilizes a reusable SpaceNet attachment to capture, compact, and safely return orbiting debris to Earth for recycling, while also researching operational and financial implications
- Delivered a comprehensive presentation of the concept to a diverse cohort, earning first place based on popular vote

LEADERSHIP AND INVOLVEMENT

USC Society of Women Engineers Los Angeles, CA
Corporate Affairs Committee September 2024 - Present

- Coordinate acquisition of 10-15 company sponsors and assist in organizing bimonthly industry panels and networking events
- Build and maintain relationships with 10+ industry employers to secure career development opportunities for members
- Engage in weekly meetings with corporate committee and executive board, contributing to strategic planning for events
- Recruit women and non-binary individuals into Society of Women Engineers, fostering an inclusive engineering community

USC Rocket Propulsion Lab Los Angeles, CA
Composites Team Contributor September 2024 - April 2025

- Devoted 5+ hours to surface preparation of student-built rocket, sanding the mandrel to optimize flight performance
- Executed precise cutting of 50+ carbon fiber components, ensuring fibers are placed accurately to enhance structural integrity
- Engaged in weekly member meetings, collaborating with 30+ students to stay informed on project developments, receive task delegations, contribute to team discussions, and encourage new member participation for further engagement