

AUSTIN JEFFREY SHARP

Mechanical Engineering Student | SolidWorks CSWA | Mechanical Design | Homelab Infrastructure

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PROFESSIONAL SUMMARY

Motivated Mechanical Engineering student with hands-on experience in mechanical design, shop fabrication, automotive service, SolidWorks modeling, and technical troubleshooting. Built and maintained a practical homelab environment with Dell PowerEdge servers, virtualization, VPN access, reverse proxy services, Docker applications, monitoring, and a public engineering portfolio website. Strong interest in mechanical systems, mechatronics, product testing, and reliable technical solutions.

EDUCATION

Bachelor of Science in Mechanical Engineering | *Grand Canyon University, Phoenix, AZ* | *Expected Graduation: May 2026*

- Certified in SolidWorks (CSWA); proficient with MATLAB, Microsoft Excel, and Google Sheets.
- Relevant coursework: Thermodynamics, Fluid Mechanics, Materials Science, Engineering Design, Electromechanical Control Systems, Stochastic Systems, and Heat Transfer.
- Hands-on experience with welding, shop work, material handling, fabrication, and safety protocols.
- Weekly campus volunteer experience tutoring and mentoring K-12 students, strengthening communication and leadership skills.

PROJECTS & TECHNICAL EXPERIENCE

Senior Capstone Project - Automated Book Scanner | *Grand Canyon University* | *2025 - 2026*

- Designed a portable automated book scanner concept focused on safe page handling, affordability, reliability, and ease of use for delicate books and documents.
- Developed mechanical concepts in SolidWorks, including a linear book conveyance system, adjustable frame, scanner integration, and vacuum-assisted page-turning approach.
- Applied engineering design practices including iterative prototyping, subsystem testing, material selection, bill of materials planning, risk mitigation, and user-centered design improvements.
- Balanced portability, rigidity, manufacturability, and operator ergonomics using modular construction, casters, and height-adjustable support features.

Engineering Portfolio Website & Homelab Infrastructure | *Personal Project* | *2025 - Present*

- Built and maintained a public engineering portfolio website at sharphomepage.com to present technical projects, school work, and professional experience.
- Configured homelab services using Dell PowerEdge servers, Proxmox virtualization, Ubuntu Server, Docker, Nginx Proxy Manager, Cloudflare DNS, and reverse proxy routing.
- Set up private remote access using Cisco ASA VPN / AnyConnect concepts, firewall rules, internal service segmentation, and domain-based access planning.
- Deployed and tested self-hosted services including Jellyfin, Frigate NVR, Home Assistant, Grafana/Prometheus monitoring, Portainer, Samba shares, and internal dashboards.
- Troubleshoot networking, storage, VM migration, iSCSI/shared storage concepts, SSL/DNS issues, server hardware, and remote management access across multiple systems.

EXPERIENCE

Mechatronics Engineering Intern | *Daimler Truck North America (DTNA)* | *Portland, OR* | *June 2026 - September 2026*

- Designed, assembled, and validated a test bench for Freightliner cab interior dash systems to simulate real-world operating conditions.
- Worked with wiring and wiring diagrams for complex vehicle systems to support integration and functionality of dash electronics.
- Collaborated with cross-functional teams on testing procedures, troubleshooting, component alignment, and mechanical adjustments.
- Documented procedures, test results, and design modifications to support engineering analysis and future production testing.

General Employee | Les Schwab Tires | *Phoenix, AZ | May 2023 - August 2024*

- Assisted customers during check-in, diagnosed vehicle and tire issues, and performed essential vehicle maintenance.
- Inspected and replaced worn or damaged tires according to manufacturer specifications to support customer safety and reliability.
- Completed tire rotations and puncture repairs while maintaining a clean, organized, and safe workspace.

Lot Attendant | Sanderson Ford | *Phoenix, AZ | October 2022 - April 2023*

- Assisted customers upon arrival, maintained lot organization, inspected vehicles during transitions, and supported smooth dealership operations.
- Cleaned and organized the lot by sweeping, removing trash, and pressure washing vehicles and work areas.

SKILLS

Mechanical / Design: SolidWorks (CSWA), CAD modeling, mechanical design, prototyping, fabrication, welding, shop safety, automotive diagnostics

Server / IT Systems: Proxmox, Ubuntu Server, Docker, Nginx Proxy Manager, Cloudflare DNS, Cisco ASA VPN concepts, Grafana/Prometheus, Samba, remote access troubleshooting

Tools / Hardware: Dell PowerEdge servers, wiring diagrams, test bench setup, hand tools, shop tools, vehicle maintenance tools

Software / Analysis: MATLAB, Microsoft Excel, Google Sheets, engineering calculations, simulation support, documentation

Professional: Problem solving, communication, time management, customer service, mentoring, documentation, continuous learning

Interests: Mechanical systems, mechatronics, homelab infrastructure, cars, camping, fitness, hands-on technical projects

References available upon request