

Steven Sun

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EDUCATION

Purdue University, West Lafayette, IN

Pursuing Bachelor of Science in Mechanical Engineering

Expected Spring 2028

SKILLS

Engineering Design & Manufacturing: SolidWorks, Siemens NX, 3D Printing, Laser Cutting, Manufacturing & Fabrication

Computation & Data Analysis: Python (data processing), MATLAB (numerical analysis), Experimental Data Analysis, Microsoft Office Suite

Research & Technical Communication: Engineering Research, Literature Review, Technical Documentation, Instruction & Mentoring

Communication & Media: Public Speaking, Technical Presentations, Mandarin, Video & Audio Editing, GIMP, Photoshop, Davinci Premiere

Quality & Manufacturing: IQ/OQ/PQ Validation, Root-Cause Analysis (NCR/CAPA), Nordson X-Ray & Keyence Inspection, Material Review Board (MRB), SMT Assembly, ISO/IPC Standards, Component Inspection

EXPERIENCE

Creation Technologies

May 2026 – August 2026

Quality Engineering Intern

Dallas, TX

- Investigated NCRs and CAPAs on active EMS production lines using root-cause analysis to implement containment actions.
- Authored and executed IQ/OQ/PQ validation protocols for manufacturing equipment and trained floor operators on SOPs.
- Managed daily Material Review Board (MRB) triage for non-conforming materials to minimize line downtime.
- Monitored yield, defect, and scrap metrics to drive continuous improvement across SMT and box-build assembly.
- Operated Nordson X-Ray and Keyence measurement tools to execute component inspections per IPC and ISO standards
- Operated Wave and Selective Solder Machines and Juki SMT Lines. Mass component inspection.

FIRST Robotics Competition

August 2022 – May 2025

Mechanical/Programming Lead

International

- Led subsystem design from concept to competition; designed and fabricated drivetrain and actuator systems under strict weight and power constraints, lowering chassis weight 25%, improving speed 15%.
- Integrated sensors and control logic to improve autonomous accuracy and cycle time by 1.5x
- Maintained formal design documentation, advanced to state and world championships

Boilerexams

October 2025– Present

Content Creator/President

Purdue University

- Create comprehensive video explanations and interactive exam questions for MA261 (Multivariable Calculus)
- Support a student-led educational platform serving 23 courses with 10 million global submissions, including 1.8 million student submissions in MA 261 alone and 108K hours studied

NASA Texas High School Aerospace Scholars

August 2023–May 2025

Intern/Mechanic CAD Lead and Presenter

Houston, TX

- Completed NASA-aligned engineering curriculum, applied 3D modeling and systems trade studies to mission design challenges
- Applied 3D modeling, programming, and technical research methods to aerospace problems

CAST-STEM Research Program

June 2023 – August 2023

Intern/Team Lead

Dallas, TX

- Designed and tested PVDF nanofiber energy-harvesting structures converting mechanical strain to electrical output, 4 mW per action
- Built test rigs and led a 4-student sub-team coordinating fabrication and validation

UT Southwestern Medical Center

June 2024 – May 2025

Radiology Research Intern

Dallas, TX

- Performed in-vivo murine surgical procedures for controlled cancer implantation under faculty supervision
- Collected imaging and response data to evaluate therapeutic effectiveness, with 90% treatment success rate
- Co-authored abstract submitted to BMES; presented at UTSW Trainee Research Day and ACS regional conference

AWARDS

Presidential Volunteer Award (Gold, Bronze)

2022, 2023

BMES High School Poster Abstract Presenter

2024-2025

Dean's List & Semester Honors Recipient

2025

FIRST Robotics State Champion & World Championship Qualifier

2022-2024

DFW-CIE Young Achievers Award

2024

AFFILIATIONS

Eagle Scout, Boy Scouts of America – Assistant Senior Patrol Leader

- Led long-term planning, coordination, and execution of service and leadership initiatives
- Held multiple leadership roles including Assistant Senior Patrol Leader and Patrol Leader

Society of Asian Scientists and Engineers (SASE)

- Attend weekly engineering and mentoring programs to network with company executives.

American Society of Mechanical Engineers (ASME)

- Design sub-team, competing in semester design challenge to test engineering skills and abilities against other club members.