

ANSH DWIVEDI

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LinkedIn



EDUCATION

- **Purdue University - B.S. Mechanical Engineering**, Expected 2030; West Lafayette, IN
- **South Carolina Governors School for Science and Mathematics**, 2024-2026; Hartsville, SC

RESEARCH EXPERIENCE

Summer Research Intern, Clemson University SPRI, Summer 2025

- Developed modular camera sensor suites for UAV/UGV environmental hazard and wildfire monitoring
- Prototyped and tested static, gimbal, and spherical-joint 360° imaging systems using Raspberry Pi cameras and custom hardware
- Reduced estimated 360° imaging hardware costs from ~\$15,000 for a commercial system to ~\$300 while prioritizing modularity and field repairability

X-59 Research Intern, NASA SEES / The University of Texas at Austin, Summer 2024

- Researched low-boom supersonic flight, developing Arduino-based microphone systems and contributing to wind tunnel simulation and testing
- Presented team research on sustainable supersonic flight at the 2024 American Geophysical Union Annual Meeting

WORK EXPERIENCE

IT Support & Infrastructure Technician, 1 Point System, 2023-Present

- Manage and maintain the company's U.S.-based computer and networking hardware, troubleshooting systems to ensure reliable day-to-day operations
- Develop and deploy server and data storage infrastructure to support company operations across the United States and India
- Install, configure, and repair computers, printers, networking equipment, and CAT6 infrastructure
- Maintain hardware inventory and coordinate deployment, replacement, and upgrades of U.S.-based systems

STEM Day Camp Counselor, Club SciKidz, Summer 2025

- Led and supervised hands-on STEM activities for students ages 7-13, maintaining a safe and engaging learning environment
- Taught Junior Scientist, Junior AI and Chatbot, and Advanced Robotics with LEGO SPIKE camps through demonstrations and project-based activities

ENGINEERING & ROBOTICS

Team Captain, FIRST Tech Challenge Team 22972 "Excalibur"

- Led a 15-member team through robot design, fabrication, programming, and competition
- Designed and 3D-printed components, developed autonomous and TeleOp systems, and earned the *Inspire Award*

Team Captain, SeaPerch Robotics

- Led design, construction, and competition strategy for an underwater ROV team that for the International SeaPerch Challenge in two consecutive years

ENGINEERING PROJECTS

Modular Desktop Wind Tunnel, 2026-Present

- Designing and fabricating a modular wind tunnel using CAD, 3D printing, CNC machining, and interchangeable test platforms
- Developing flow conditioning and ultrasonic mist visualization with Arduino-based fan control and capacitive-touch inputs

Custom FPV UAV Systems, 2025-2026

- Built and integrated custom multirotor UAV systems incorporating flight controllers, ESCs, motors, FPV video systems, radio control, and custom power distribution
- Diagnosed mechanical, electrical, firmware, and power-delivery failures through iterative bench and flight testing

LEADERSHIP & SERVICE

Founder & Team Mentor, FIRST Tech Challenge Team 37033, 2026-Present

- Founded and mentor a 4-H FTC team, guiding students through robot design, programming, prototyping, and competition preparation

Eagle Scout, Scouting America, 2015 - Present

- Served as Senior Patrol Leader and led a 12-person Philmont crew; completed an Eagle Scout service project benefiting the Hindu Center of Charlotte

Makerspace Assistant, Sullenberger Aviation Museum, 2024-2026

- Supported hands-on STEM activities and assisted visitors with makerspace equipment, materials, and engineering-focused activities

AWARDS AND HONORS

- **1st Place, Computer Science, Physics and Engineering Division**, SCJAS, 2026
- **NOAA Taking the Pulse of the Planet Award**, 2026
- **RICOH Sustainable Development Award**, 2026

TECHNICAL SKILLS

Design: SolidWorks, Onshape, Fusion 360

Fabrication: FDM 3D Printing, CNC Machining, Laser Cutting

Programming: Python, Java, MicroPython

Hardware & Systems: Arduino, Raspberry Pi, Soldering, PC/Server Hardware, Linux, Networking