

# Darby Hanes

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## EDUCATION

### Applied Physics and Electrical Engineering Dual Degree | Texas Tech University

Fall 2021 - Spring 2025 | GPA 3.8 | Sigma Pi Sigma Honor Society

**Certificates: L1 High Power Rocketry, Google Data Analytics, Mathworks Systems Engineering**

## PROFESSIONAL EXPERIENCE

### Digital Signal Processing Intern | JT4

Las Vegas, NV | Summer 2024

- Verification and validation of LMS adaptive filters
- MATLAB simulations and analog testing

### Electrical Engineering Intern | Sparx Engineering

Manvel, TX | Summer 2023

- Built PCB from scratch from design to assembly
- Created new components for updating digital library
- 50+ hours of soldering experience

### Circuits Tutor | Texas Tech University

Lubbock, TX | January 2023-May 2024

- Led weekly tutoring and guided students through hardware projects

### Calculus Learning Assistant | Texas Tech University

Lubbock, TX | 2021-2022

- In-class tutoring for class sections of 100+ students

### Congressional Intern | TX-19 District Office

Manvel, TX | Spring 2022

- First point of contact for TX-19 constituents

### Chemistry Intern | Countertrace

Manvel, TX | 2020 - 2022 (Seasonal)

- Ran tests, familiar with Infrared Spectrometer, Luminometer

## RESEARCH

### RF Lab 2024-Present

RF Imaging applications in biomedical engineering

### Bio-electrics Lab | 2023-Present

Simulations of gold nanoparticles and neurons

### Advanced Particle Detector Lab | 2022-2023

Laser calibration, clean room monitoring via weatherstation

## INVOLVEMENT

**President | Society of Physics Students**

**Vice President | Women in Physics**

**Vice President | Sigma Pi Sigma**

**Leadership Team | GEAR Robotics**

**Avionics Lead | Raider Aerospace Society**

**Human Rights and Advocacy Lead | Raiders**

**Helping Others | 2021-2022**

## SKILLS

**Software and Programming:** Altium Designer, Python, C,C++, MATLAB, Icarus Verilog, Visual Studio, Multisim, COMSOL, CAD, Linux, HTML, CSS, Data Analytics, SQL, R

**Hardware:** Soldering, PCB design and assembly, troubleshooting

**Sidequests:** Working towards fluency in French, learning rocket propulsion through Rocket Propulsion Elements