

# Sean Vincent Confoy

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## EDUCATION

### Vanderbilt University

*Bachelor of Engineering in Mechanical Engineering, Minors in Engineering Management and Digital Fabrication*

• **GPA:** 3.99/4.0 | **Dean's List** (4/4) | **SAT:** 1580

**Relevant Coursework:** Thermodynamics, Mechanics of Materials, Linear Algebra, Aerodynamics, Circuits, Fluid Mechanics

**Nashville, Tennessee**

August 2022 - May 2026

### Davidson Day School

*High School Graduate*

**Weighted GPA:** 4.59 **Unweighted:** 4.0/4.0

**Honors:** Valedictorian, Best Mathematician in Grade twice and Best Scientist once for upperclassmen, Harvard Book Award

**Cornelius, North Carolina**

Graduated May 2022

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## PROFESSIONAL EXPERIENCE

### United States Government Secret Security Clearance

• In the process of obtaining a US Secret level security clearance as a result of an internship with H.I.I.

**United States of America**

June 2024 – Present

### Vanderbilt Aerospace Design Laboratory

*Lead Payload Engineer*

- Engineered retractable shovel payload with multi-stage gearbox, enabling reliable soil extraction for NASA competition rocket
- Led a team of 4 engineers through design reviews, testing, and risk analysis, ensuring deadlines were met under requirements
- Authored technical reports documenting failure analysis and design trade studies presented to faculty and industry reviewers

**Nashville, Tennessee**

August 2025 – Present

### PAE Engineers

*Mechanical Engineering Intern*

- Engineered HVAC duct layouts meeting ASHRAE airflow standards for high-profile technology clients like Amazon and Intuit
- Revised HVAC and plumbing systems based on client feedback, producing updated schematics and water riser diagrams
- Performed load calculations to determine optimal CFM and evaluated exhaust duct runs to determine static pressure losses

**New York, New York**

May 2025 – August 2025

### Huntington Ingalls Industries

*Mechanical Engineering Intern*

- Developed three-dimensional naval vessel models, including a 1.12 million square foot dry dock for housing aircraft carriers
- Composed numerous two-dimensional marine and naval drawing schematics used for renovating foundation and piping system
- Inspected the USS John F. Kennedy aircraft carrier on foot, studying defense technology and electrical and piping systems

**Newport News, Virginia**

June 2024 – August 2024

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## LEADERSHIP & INTERESTS

### Tikkun Olam Makers

*Mechanical Engineer*

- Analyzed needs of patient with severe condition similar to cerebral palsy and conceptualized potential projects to assist them
- Formulated multiple designs to address patients' difficulty to hold everyday objects and inability to avoid looking toward sunlight
- Combined brainstormed solutions into working prototypes which vastly streamlined patients' ability to enjoy simple pleasures

**Nashville, Tennessee**

September 2024 – Present

### Vanderbilt Fusion Project

*Fusion Researcher*

- Designed CAD models for a pelican case and control panel to house buttons, switches, and wiring for fusion reactor startup
- Fabricated a motor-driven, switch-operated, and partially 3d printed mechanism for supplying power to the fusion reactor
- Interviewed numerous students, assessed their qualifications, and oversaw the selection of new members to the organization

**Nashville, Tennessee**

February 2024 – February 2025

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## MEMBERSHIPS AND INTERESTS

**Physical Skills:** Welding, Soldering, Lubricating, Vacuum Forming, Arduino, Lathe, Mill, Bandsaw, Composite Manufacturing

**Interests:** Tau Beta Pi Honor Society, Sigma Nu, Rock Climbing, Jiu Jitsu, Scuba Diving, Exercise, Archaeology, Snowboarding

**Digital Skills:** SolidWorks Associate Certified, Inventor, AutoCad, Maya, Python, MATLAB, Fusion360, LabVIEW, Mathematica