Eric Holst

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Education

Vanderbilt University — Nashville, TN

Bachelor of Engineering in Mechanical Engineering — *Aug. 2019 – May 2023*

- **Select Coursework**: Fluid Mechanics, Aerospace Propulsion, Airplane Aerodynamics, Combustion, Heat Transfer

Experience

Vanderbilt Aerospace Design Laboratory | **PI: Dr. Anilkumar** — Nashville, TN

Research Engineer — *July 2022 - Present*

- **Auxiliary Airfoil Research**: Current research in how external airfoils affect a rocket's coefficient of drag and flight stability; specific interest in modeling wingtip vortices
- **Fiber Optic Structural Health Monitoring of Vehicles**: Assisting graduate student project to monitor rocket forces through fiber optic cables; stress and strain simulations, testing, and analysis
- **Active Apogee Control Secondary Payload**: Designed, manufactured, and tested novel secondary payload design to autonomously manipulate rocket trajectory during flight with two other engineering students
- **Cost Effective Vacuum Chamber**: Designed and built vacuum chamber for pressure based testing of sensors under constrained budget; created testing procedure; analysis of data

A.M. Gatti, Inc — Fairless Hills, PA

Intern Research and Development Engineer — *May - July 2022*

- **Technical Design**: Designed new company product that has significant improvements on competing alternatives; created technical drawings for manufacturing
- **Additive Manufacturing**: Designed and printed functional parts and devices in a variety of filaments that aid in the manufacturing process; saved company significant money in reduce material cost and machining hours
- **Test Equipment Design**: Designed and built an ultra high pressure test stand for endurance and life cycle testing of products
- **Technical Documentation**: Created revised CAD models and technical drawings for product manufacturing from legacy drawings that no longer meet drafting standards

Crown Holdings — Yardley, PA

Intern Process Engineer — *May - July 2021*

- **Automated Failure Analysis**: Created Python & Excel program to enable the analysis of new and unique statistics that can help increase yearly production of each facility in the order of millions of cans by reducing downtime
- **Data Analysis and Reporting**: Created and published data matrices and monthly consumable reports to company executives and plant managers
- **KPI Analysis Expansion**: Contributed to the expansion of KPI reporting to new company divisions

Extracurriculars

Vanderbilt Rocket Team

Vice President, Lead Vehicle Engineer, and Student Safety Officer — *2022-Present*

- **Organization**: Team of senior engineering students who design, build, and fly novel rocket and payload for annual NASA USLI competition
- **Role**: Responsible for upholding safety standards; mechanical systems design lead for vehicle and secondary payload; avionics engineer; manufacturer of metal and 3D printed parts

Vanderbilt Motorsports

Mechanical Engineer — *2019-2021*

- **Mechanical Design and Manufacturing**: Contributed to design and manufacturing of clutch, shifter and radiator systems

Technical Skills

Programming Languages: MATLAB, Python, LabView, C++

Technical Skills: SolidWorks, Creo, Ansys, CFD, FEA, LaTeX, student pilot, Excel, additive and subtractive manufacturing, research and experimentation, project management