

Zachary Friedman

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EDUCATION

Vanderbilt University

Bachelor of Engineering in Mechanical Engineering
Minor in Engineering Management | GPA: 3.92/4.0

Nashville, TN

Expected Graduation May 2022

WORK EXPERIENCE

Avascent

Summer Analyst

Washington, DC

June 2021– August 2021

- Assisted consulting engagement by constructing weighted benchmarking model of 100 aerostructures manufacturers and presenting optimal acquisition opportunities for a leading commercial space company
- Led competitor analysis and assisted in 10-year market forecast for major provider of commercial avionics
- Spearheaded initiative to build a database of 40 leading hybrid propulsion firms to advise client strategies

Clark Construction Group

Project Management Summer Associate

Washington, DC

May 2020 – August 2020

- Collaborated with project managers to plan and execute a \$100M dorm renovation project
- Leveraged KPI analysis to refine and implement a plan to accommodate a \$20M reduction in project scope
- Spearheaded an innovative software solution for an abrupt transition to virtual collaboration for 40+ sites

Bertin Engineering Associates, Inc.

Mechanical Engineering Intern

Glen Rock, NJ

May 2019 – August 2019

- Drafted electrical and mechanical systems, including an ongoing \$100M project for New Jersey City University
- Assisted project managers in preparing survey maps and construction plans for six clients weekly
- Developed skills in coordinating design processes within a 20-person, cross-functional engineering team

LEADERSHIP EXPERIENCE

Vanderbilt Aerospace Design Laboratory

President and Project Manager

Nashville, TN

May 2021 – Present

- Leader of a 7x national champion high-powered rocket team for the NASA Student Launch competition
- Direct a 15-person engineering team to research, design, and launch a novel rocket and robotic payload
- Conduct STEM education and outreach to 300+ students with hands-on physics and rocketry demonstrations
- Manage NASA requirements to map one-mile radius and track location without GPS usage for Mars missions

Vanderbilt University School of Engineering

Teaching Assistant: Technology Strategy, Dynamics, Fluid Mechanics

Nashville, TN

December 2019 – Present

- Mentored a cohort of 30 students in the development of a business strategy for emerging technologies
- Reviewed students' 80-page business plans to give feedback on effective communication & organization
- Host weekly tutoring sessions for students to learn advanced concepts of dynamics and fluid mechanics

Experience Vanderbilt

Vice President of Internal Affairs

Nashville, TN

January 2019 – Present

- Guide a 10-person team in developing student-led financial assistance of roughly \$500,000 for 1,300 students
- Partner with administrators to demonstrate financial needs and execute funding increases by 20% annually
- Co-authored a data sorting algorithm utilizing MATLAB to objectively select award recipients without bias

Scalar Development

Co-Founder and Project Manager

Nashville, TN

May 2020 – May 2021

- Co-founder of a creative software development agency that ballooned to \$13,000 in first-month revenue
- Managed a team of seven software developers to deliver high-quality websites & apps to customers
- Accommodated customer needs in cultivating designs and strategies to ensure 1-year ROI in digital services

AWARDS AND HONORS

- Vanderbilt University, School of Engineering – Dean's List all semesters
- Vanderbilt University – Charles Robert Baker Scholar

SKILLS AND HOBBIES

- AutoCAD, COMSOL Multiphysics, Creo Parametric, Excel, LabVIEW, MATLAB, Mathematica, Onshape, Python
- Aviation, scuba diving, long-distance running, powerlifting, CFD