

Zachary Raboin

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Objective:	Find an internship or full-time manufacturing engineering position starting the summer of 2020		
Education:	University of New Hampshire – College of Engineering and Physical Sciences Aug. 2016 – May 2020, anticipated GPA: 4.0/4.0 Highest Honors B.S, Mechanical Engineering Kenneth J. Higson Scholar		
Tech Skills:	Solidworks MATLAB Manufacturing Design Print Drafting GD&T ASME Y14.5-2018		
Experience:	<div><div>Sig Sauer Inc. May 2018 – Present</div><div><i>Manufacturing Engineering Intern</i></div><div>Collaborated with engineers and toolmakers to design numerous fixtures solving a variety of problems encountered in the manufacturing process of Sig Sauer firearms. This involved modeling the fixtures in Solidworks, detailing the full drawing packages utilizing geometric dimensioning and tolerancing, making appropriate material and heat treatment selections, and contacting distributors to have each fixture built efficiently.</div></div> <div><div>UNH Rocket Design Team November 2018 – Present</div><div><i>Mechanical Engineer – Propulsion Team</i></div><div>Currently working with several of my peers to design, manufacture, and test a fully functioning hybrid rocket engine, intended to reach 10,000 feet at apogee. Assist in design of rocket components as well as testing rigs, including a hot-fire test fixture equipped with various data measurement sensors (load cell, thermocouple, etc.). We plan to compete in Spaceport America Cup in Las Cruces, New Mexico.</div></div> <div><div>UNH Mathematics Center September 2017 – May 2019</div><div><i>Calculus Tutor</i></div><div>Dedicated to mastering the curriculum for every major math course and utilizing strong interpersonal skills to teach students struggling in those courses.</div></div> <div><div>University Project Work</div><div><i>MATLAB Simulation</i></div><div>1. Tasked with designing and modeling a thermal management system to regulate temperature for high precision electronics inside a military drone sensor pod, based off an authentic DoD solicitation. The refrigeration system was modeled on MATLAB, accounting for countless external scenarios and non-ideal parameters. All research and simulation results were compiled in an extensive technical report following rigid ASME guidelines.</div><div>2. Developed MATLAB models to simulate the propulsion system powering a large subsonic military drone. This involved investigation of various fuels, aerodynamic effects, altitude dependencies, and device efficiencies. All data and conclusions synthesized to compose a comprehensive ASME report.</div></div>		
Relevant Coursework:	<div>Engineering/Physics Physics I & II, Chemistry, Statics, Mechanics of Materials, Dynamics, Material Science, Solidworks Modeling, Engineering Computing (MATLAB), Thermodynamics, Circuit Analysis, Fluid Dynamics, Thermal Systems, Heat Transfer, Machine Design, Systems & Controls, Experimental Measurements & Data Analysis</div> <div>Mathematics Calculus I & II, Multidimensional Calculus, Differential Equations, Numerical Methods</div> <div>German Language 5+ years of formal instruction</div>		
Other Skills:	Project Management Organizational Leadership Creativity and Problem-Solving Process Improvement		