Cole DeSimone

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EDUCATION

University at Buffalo, The State University of New York
Bachelor of Science in Aerospace Engineering — Buffalo NY | 2022- 2026
Cumulative GPA: 3.4/4.0

PROFESSIONAL EXPERIENCE

General Dynamics Land Systems | Industrial Engineering Intern — Lima OH | Summer 2025

- Improved line efficiency by 9% by developing an automated takt time schedule generator for 12 stations
- Standardized work and **manpower assignments** for 4 stations with 70-100hr cycle times
- Identified and collaborated with production and quality engineering to solve major contract violation
- **Automated daily performance reporting** (Efficiency, HPU, Pay Data) in VBA for 3 departments
- Completed 22 time-studies and updated standards to ensure labor alignment with production goals
- Implemented one-piece flow in collaboration with plant engineering, improving efficiency by 12%

Actuec Precision Aerospace | Industrial Engineering/Project Engineering Intern — Meadville PA | 2023-2025

- Automated PLC reporting by creating an excel macro converting CSV outputs to PDF's
- Generated **4 facility-wide digital twins** in SolidWorks to enable cellular reconfiguration simulations
- Designed and implemented 4 custom fixtures to improve process reliability across part families
- Developed excel macro to calculate coating requirements and cost reducing sales and materials calculation time
- Designed and prototyped an adjustable fiber optic tool to identify burrs within boreholes/tap
- Compiled quality data in support of $1.5M cost avoidance with successful resolution of potential quality escape

Composite Materials Research Assistant | University at Buffalo — Buffalo NY | 2024-Present

- Designed and prototyped 8 variants of 3D printed parallel plate capacitors to optimize capacitance/resistance
- Investigated impact of filament type/material properties on capacitor performance

DRONE Lab CAD Engineer | University at Buffalo — Buffalo NY | 2025-Present

- Designed, built, and programmed **self-leveling drones** using Arduino and Prusa Slicer
- Produced functional prototypes using **3D printing** and conducted testing to improve performance, stability, and manufacturability

LEADERSHIP EXPERIENCE

UGTA Engineering Principles — Buffalo NY | 2023

- Supervised lab sections and assisted students with hands-on engineering design/build projects
- Reviewed and graded assignments; provided insightful constructive feedback to ensure learning

UGTA Introduction to Mechanical Engineering Practice — Buffalo NY | 2024-Present

- Assisted in teaching core mechanical design principles, including CAD modeling, material selection, and engineering analysis
- Graded assignments, quizzes, and exams to ensure comprehension of course materials

AWARDS & CERTIFICATIONS

Honors College Scholar — Buffalo NY | 2022-Present
LEAN Six Sigma Green-Belt — Lima OH | 2025-Present
Provost Scholar — Buffalo NY | 2022-Present
EAS199 Freshman Engineering Design Award — Buffalo NY | 2022-2023

SKILLS

Software: SolidWorks, VBA, Prusa Slicer, Power BI, Arduino, MATLAB, Python, Oracle
Methods: Lean Manufacturing, Time Studies, Digital Twin Modeling, Regression Analysis
Focus Areas: Aerospace Manufacturing, Process Optimization, Composite Materials