

CONTACT

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ADDRESS

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EDUCATION

Rochester Institute of Technology, Rochester, NY
Undergrad GPA : **3.82** Graduate GPA : **3.51**

BS in Mechanical Engineering Technology
MS in Manufacturing and Mechanical Systems Integration
(with a Product Design concentration)

PROJECTS

- **NASA Sample-gathering Device**
Designed and manufactured three containment pods for a Micro-g NExT Challenge. The device was tested at the NBL in Texas.
- **Automated T-Shirt Screen Printing Cell**
Lead, financially managed, and participated in the design of the RIT SME 6ft hexagonal 3-color T-shirt screen printing cell.
- **Flow Control Valve using M.R. Fluids**
Wrote Master's thesis on creating a low-resistance flow limiting valve that can be controlled using MR fluids and a magnetic field.
- **Drone Visual Systems Integration Package I and II**
Designed and manufactured a lightweight aluminum frame that was capable of integrating nearly \$95k worth of imaging sensors.
- **Noblex Panoramic Camera Fixture**
Designed and manufactured a frame and remote trigger mechanism to integrate a panoramic film camera to a hexacopter.
- **Four-piece 360:1 Gearbox Challenge**
Designed a four component system that reduced the speed of a rotational input to prove to a professor that it was possible.
- **Co-Author Orthopedic Research Paper**
Worked as a data analyst researching joint movements of the hand with data collected from a re-purposed animatronics glove.
- **Rifle Target Image Analysis Algorithm**
Developed and Programmed a Rifle target analysis program in MATLAB using image processing techniques.
- **Ultralight Cam-Style Lifting Device** (Class Project)
Team leader designer in creating a ½ lb device that lifted 70 times its own weight using only frictional forces.
- **High-Powered LED Desk Lamp**
Working on creating a self-balancing variable brightness LED lamp from scratch using a custom cam-spring mechanism.
- **Pak-Track Shipping Device**
Designed, Programed CAM, and lead a team to produce nearly 200 aluminum devices used for environmental recording.

EMPLOYMENT

- **Engineering Intern:** 2013
PRS Guitars: Worked with GD&T tolerancing and engineering drawings of parts / trouble-shooting for the new line of guitars.
- **HVAC Systems Apprentice:** 2014
James E Knox & Sons: Worked on repair and installation of industrial and residential HVAC systems.
- **Lab Assistant In RIT Machine Shop:** 2015
CAST at RIT/MMET: Working to help students design and learn to manufacture parts for both school and personal projects.
- **Learning Assistant for Multi-variable Calculus and Differential Equations:** 2015
COS at RIT: Held out of class recitation hours, tutored students in higher level mathematics, and attended classes as an aid.
- **Northrop Grumman Engineering Co-op:** 2016
Engineering intern working in the Surface Mount Technology cell of the Mission Systems division of Northrop Grumman.
- **Northrop Grumman Engineering Co-op:** 2017
Engineering intern working in process development for state-of-the-art additive manufacturing methods at the BWI facility.
- **Northrop Grumman Management Co-op:** 2018
Operations Program Management intern working in manufacturing data analytics for advanced microelectronic components.
- **Graduate Research Assistant for Imaging Science:** 2019
Focused on image analysis, algorithm creation, in-field experiments, hyper-spectral data collection, and new device creation.

SKILLS

Proficient in: NX, SolidWorks (CWSA Certified), Autodesk Inventor, Autodesk Fusion 360, Microsoft Office (&VBA), Artios CAD, Minitab, MATLAB, Python, Autodesk Eagle, Differential equation analysis, Dynamic System analysis, Statistical analysis and DOE.
Manufacturing Skills: 6σ Green Belt Certification (DMADV), CNC & Manual milling machines and lathes, Additive Manufacturing

ACTIVITIES & ACHIEVEMENTS

BSA: Eagle Scout - 2012: Former assistant senior patrol leader for Troop 532 from Easton, Maryland
Outstanding Undergraduate Scholar Award: Granted to the top 1% of every college during the student's senior year.
Society of Manufacturing Engineers: Former President and head of the design review team for 2016-2018 projects.
Science and Math Education Research Special Honor: Awarded for helping cut the DFW rate nearly 40% in Math 211 at RIT.
National Youth Leadership Training: Former Course Director of week-long leadership program.