

# Daniel Rosenthal

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## EDUCATION

**Wake Forest University, Winston-Salem, NC**

May 2023 Graduation

*Bachelor of Science in Engineering with a concentration in Electrical/Computer Engineering*

*Minors in Computer Science & Mathematics*

**GPA:** 3.66; **Dean's List:** 2019, 2020, 2021; **Study Abroad:** London, Wake Forest Worrell House, Fall 2021

**Technical Skills:** Proficient in MATLAB, R, Arduino, Raspberry Pi, HTML & CSS, Java, Python, Fusion 360, AWS, Microsoft Suite, Google Suite, Adobe Creative Cloud, Blender, Git, CHORDS

**Relevant Coursework:** Materials & Mechanics, Transport Phenomena, Control Systems/Instrumentation, Computational Modeling Fundamentals of Computer Science, Data Structures & Algorithms, Statistical Models, Multivariable Calculus, Discrete Mathematics, Linear Algebra & Differential Equations

## ENGINEERING, COMPUTER SCIENCE, AND DATA SCIENCE EXPERIENCE

**Stereo Vision Wildfire Drone Research, Research Assistant**

Winston-Salem, NC, January 2021 - Present

- Research potential single-board computers, stereovision HATs, cameras, and computer vision platforms for drones and processing analysis with fellow student researcher
- Study relevant projects and forums of potential components to ensure usability and present findings to research professor and other research assistants with fellow student researcher
- Implement Raspberry Pis, Stereopis, and AI to create stereo vision camera system for use on drones monitoring wildfires to observe the intensity of fires and to improve the environmental recovery process
- Write Python scripts to automate testing of data transfer frequency from Raspberry Pi's to CHORDS portal on AWS
- Collaborate with team and research professor to diagnose problems and create solutions that directly impact the local ecosystem

**Research and Design Projects, Engineering and Computer Science Classes**

Winston-Salem, NC, September 2019 - Present

- Created UltrasonicEyes Toy: a 3D-printed project with an Arduino, ultrasonic sensors, and LED matrices that responds to its environment
- Developed numerous mathematical models in MATLAB to solve real-world problems, with 3D graphing and optimization
- Used Arduino sensors to determine whether the roof of a campus building had the potential to be converted into a green roof
- Studied cervical spine injuries and tested new techniques to ensure patient safety during transfers between stretchers/hospital beds
- Used IMU sensors and MATLAB to create a final report detailing findings
- Studied and experimented stormwater treatment options to remove contaminants from public water sources with 2 group members
- Collaborated with 3 students to prototype, build, and present a functional desk of cardboard assist relief shelters

**Sports Analytics Club, Club Member**

Winston-Salem, NC, September 2019 - Present

- Develop analytical skills by collecting and analyzing data for Wake Forest's Olympic sports program
- Use R Studio to make statistical observations and conclusions for self-authored articles on the Club's website

**Young Engineers Club, Club Member**

Fairless Hills, PA, September 2018 - May 2019

- Developed projects including but not limited to: rubber band cars, model rockets, and towers made of paper
- Participated in 3 Young Engineer Competitions at local Delaware Valley high schools; Pennsbury team finished in third place

## PROFESSIONAL EXPERIENCE

**Golf cart and course attendant, Trenton Country Club**

Trenton, NJ May 2021 - August 2021

- Provided timely and excellent customer service to elite club members and guests of special events
- Inspected and maintained clubhouse and golf carts to preserve and improve cleanliness of the course

**Outdoor trip leader, Outdoor Pursuits**

Winston-Salem, NC, May 2020 - January 2022

- Responsible for groups of up to 8 students on adventures including hiking, slacklining, biking, and paddleboarding
- Utilized organizational skills to manage gear rental desk and rock climbing wall to ensure and maintain efficiency & safety

**Photographer/Videographer/Graphic designer, Self-Employed**

Yardley, PA, September 2018 - August 2019

- Leveraged multiple social media platforms to engage local high school basketball players and negotiate deals to provide services
- Filmed and photographed numerous local games and posted highlights on social media to attract college coaches and recruiters

**Windsurfing counselor, Camp Kabeyun**

Alton Bay, NH, Summer 2018/2019

- Taught campers aged 7-16 windsurfing; provided campers with a fun, safe, and secure time on the water
- Collaborated with staff to supervise a cabin of 11-13 year-olds; developed leadership and character as well as personal growth

**Photographer/Videographer, WBCB 1490 Radio Station/Website**

Fairless Hills, PA, September 2017 - May 2019

- Increased station's social media presence by producing highlight videos of local high school basketball and football games
- Traveled to basketball games throughout Pennsylvania and New Jersey to provide video and photo coverage