Allyson Williams

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Objective: Seeking a position in a professional and diverse environment, where I can improve and enhance my technical ability in engineering sciences.

EDUCATION

University at Buffalo, The State University of New York — *Bachelor of Science in Mechanical and Aerospace Engineering*, May 2024

Overall GPA 3.96/4.00

Honors College

EXPERIENCE

Moog ISP Space and Defense Intern, Niagara Falls

May 2023- Current

- Created test procedures and assembly work instructions for rocket engine modules and monopropellant thrusters.

NYS OPRHP Engineering Intern, Niagara Falls

May 2022 - August 2022

Chief inspector of Whirlpool State Park staircase:

- Reviewed construction budgets and oversaw project sites, interpreted engineering drawings in order to communicate with contractors, created work/change orders.

World Lacrosse Championships, Ireland

Aug 2022

Provided real-time commentary and coordinated opening ceremonies.

RESEARCH

The University at Buffalo Nanosatellite Laboratory —

Contributed to the junction box project by researching arduino satellite tracking codes

Fluid Mechanics —

Undergraduate research at the University at Buffalo. Tested boundary layer heat transfer from a flat plate subjected to a sudden heat flux.

PROJECTS

Yaw Pitch Roll Gimbal

- Utilized Arduino and 3D printed parts to develop a gimbal that could control the attitude of a model plane. Used servo motors along with an LCD screen to display Euler angles.

Wind Turbine

- Compared design factors of a model wind turbine
- Tested variables such as blade pitch and torque of motor, compared their power outputs to improve final design. Compiled findings in a conceptual model and decision matrix.

Modeled Deflection of Tuning Forks

- Developed a code using MATLAB that would determine the deflection of a tuning fork, each with a specific cross section and material
- Animated deflection over time with graphical analysis

Skills

Microsoft Office (Excel, Word, PowerPoint).

MATLAB

SolidWorks (FEA analysis and GD&T)

Siemens NX

Communication

Teamwork

Arduino

Awards

Undergraduate Dean's List, 2020, 2021, 2022

1st Place Portrait Capital Region Media Arts Festival

Section II Championship in Field Hockey, 2020

8x Board of Education Award, for maintaining a 95%+ average throughout high school

5x Scholar Athlete for maintaining a 90%+ average while on a varsity sports team

Activities/Leadership

Member, Club women's lacrosse team

Member, Tau Beta Pi Engineering Honor Society

Member, Recreational Volleyball

Volunteer, Honors College Mentor

Relevant Coursework

SOLIDWORKS: Computer animated design and FEA analysis

MATLAB: Programming concepts

Heat Transfer

Dynamic Systems