Jackson Edmund Rogers

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PROFESSIONAL SUMMARY & OBJECTIVE

Aerospace and mechanical engineer seeking work experience in the aeronautical and astronautical industries, and the ability to innovate both the aerospace and mechanical engineering fields for the future.

EDUCATION

University at Buffalo, Buffalo, NY — Current (Bachelor of Science: Engineering expected May 2024)
August 2021 - May 2024, Buffalo, NY 14260
Studying Aerospace and Mechanical Engineering, 3.96 GPA
Relevant Courses: Product Design/CAE, Aerodynamics, Flight Dynamics, Gas Dynamics, Propulsion, Orbital Mechanics, Aerospace Structures, Design
Projects: Fluid Modeling - Heat Transfer, Fluid Mechanics, MATLAB | FEA Modeling - Structural Mechanics, MATLAB | Airfoil Analysis - MATLAB and XFLR5

Florida Institute of Technology, Melbourne, FL — 2020-2021 (Bachelor of Science: Engineering)
August 2020 - April 2021, Melbourne, FL 32901
Studied Aerospace Engineering, 4.0 GPA

TECHNICAL EXPERIENCE

Stark Tech, Engineering Project Manager Intern (May 2023 - January 2024)
Introduced to energy efficiency and clean energy designs in the HVAC field.

- Planned, implemented and managed all aspects of building controls systems projects.
- Provided accurate drawings for HVAC control systems and schematics using AutoCAD.
- Utilized fluid and heat transfer analysis for accurate space cooling and heating.
- Experienced project management of a multi-million dollar contract with a hospital in Utica, NY.

Research at the University at Buffalo under Dr. Elenora Botta
Researched orbital mechanics and space-tether interaction systems for space debris capture.

- Developed skills in both Lagrangian and Eulerian Mechanics.
- Expanded knowledge in numerical methods using MATLAB.
- Created a thorough series of presentations of research methods and findings.

Research at the University at Buffalo under Dr. Reza Rashidi
Lead on design team of five people who developed proprietary equipment focused on energy harvesting.

- Filed patent and pre-patent information for technology.
- Engineered microgenerators using piezoelectric, triboelectric, thermoelectric, and magnetoelectric effects as well as photo-voltaic cells.
- Crafted well written and peer reviewed research papers.

University at Buffalo Nanosatellite Laboratory
Contributed to design in guidance, navigation, and control for a space debris detecting satellite.

- Researched equipment for trade studies on gyroscopes, magnetorquers, and other components.
- Generated pointing budgets and other technical documents relating to the mission.
- Learned graduate level dynamics topics such as Kalman filtering and Monte Carlo simulations.

University at Buffalo AIAA - Design Build Fly
Designer of structural components and aerodynamics of a plane to be flown in a national AIAA competition.

- Ran simulations of structural integrity of hinged wings of developed aircraft in SolidWorks.
- Computed aerodynamic analysis with XFLR5.
- Modeled components of aircraft wing in SolidWorks to be 3D printed and mounted in assembly.

NONTECHNICAL EXPERIENCE

Youngstown Yacht Club, Head Junior Sailing Instructor (May 2019 - August 2022)
Taught over 400 young kids how to sail, the importance of sportsmanship, teamwork, and boat safety.

- Arranged lesson plans to train kids aged 4-10, and adults
- Performed maintenance sailing fleet as well as the power boat fleet.
- Developed a thorough and well planned curriculum and collaborated with instructors.

University at Buffalo Center for Fine Arts, Box Office Associate (April 2022 - Present)
Sold tickets and maintained the front entrance at the Center for Fine Arts.

- Assisted with customers to find optimal seating for their best experience.
- Maintained a well-organized seating planner and solved patron's issues.
- Managed front of house activities, including ticket scanning and refreshments.

SKILLS

Computer Programs: MATLAB/Simulink, Creo PTC, Solidworks, Fusion 360, Microsoft Office Suite, XFLR5, Autodesk AutoCAD, Inventor, ANSYS
Computer Languages: C++ (Advanced), Mathematica (Advanced), MATLAB (Advanced), Fortran **(**Basic), Java (Basic), Python (Basic)
Language Skills: English (Native) & Spanish (Fluent)

AWARDS, HONORS, & CERTIFICATIONS

- Overall 3.97 GPA over education career and Dean's List every semester.
- NYSERDA certified.
- Member of University at Buffalo's Tau Beta Pi Engineering Honor Society.
