Tyler Jordan Brooks

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Education:

Clarkson University, Potsdam, NY

Bachelor of Science in Aerospace Engineering, Minor in Mathematics   May 2024

Dean's List: All Semesters   GPA: 3.4/4.0

Awards: Diversity and Inclusion Award Recipient, National Society of Leadership and Success, National Honor Society, HOBY Scholarship Recipient

Engineering Experience:

Clarkson University Rocketry Team, Avionics and Recovery Lead, Clarkson University   Aug 2022 – May 2023
- Managed committee for team responsible for all recovery tasks and rocketry electronics
- Helped develop and operate dual deploy parachute system, controlled by programmable avionics systems
- Sized and integrated all recovery hardware, including recovery measures for deployable robot payload
- Sized and tested black powder charges for parachute deployment

Commercial Aeromechanics Intern, GE Aerospace, Cincinnati, OH   May – Aug 2022
- Lead development for airfoil mode analysis tool for automated mode identification
- Assisted on engine fleet case study for CFM56-5B/7B HPC configuration, which consisted of a safety check for airfoil excitations
- Assisted in a Low-Pressure Region study for developmental engine program, that ensures understanding of x-wind and acoustics testing for future NASA Glenn rig tests

Global Battery Manufacturing, Concept and Build Co-Op, Tesla, Fremont, CA   Jan – May 2022
- Fully designed and implemented pneumatic connector system for leak test that increased yield by 10% and decreased false failure rates by over 60% on initial trial
- Owned project to install a new manifold install tool on a production line that showed a 16-sec decrease in cycle time from Factory Acceptance Testing
- Designed and prototyped material handling carts and angled racks to assist in the production of battery packs on multiple production lines

Systems Engineering, Operations and Testing Intern, GE Aviation, Cincinnati, OH   May – Aug 2021
- Created more time efficient organizational tools for different sub-groups within CFM RISE using VBA macros
- Coordinated interdisciplinary financial budgets for developmental engine modules to organize and prepare for a high-level program annual meeting
- Managed long term financial planning for CFM RISE technology maturation (Tech Mat) investments
- Met with Module owners to further define test line items to align the detailed budget, quantify test instrumentation, and research better weight tracking methods

Technical Skills:

Software: Python – [Pillow, OpenCV, Matplotlib, Pandas, NumPy, SciPy, PyTorch], SolidWorks, MATLAB, MSC NASTRAN, Altair Hyper Works, ANSYS – [APDL, Fluent, Mechanical], AGI - STK, Open Plan, MySQL, Autodesk Inventor, Microsoft Office - VBA

Leadership Experience:

Teaching Assistant, Introduction to Engineering Design for Aerospace   Aug – Dec 2021
- Taught struggling students technical writing skills for multiple design projects such as UAV design projects, cube satellite design reports, and technical design decision reports
- Graded 25+ student reports and multiple team final reports

Society of Hispanic Professional Engineers (President, Co-Founder), Clarkson University   Aug 2018 - May 2019
- Re-established and recruited 20+ members to dormant Society
- Help students find their identity at a predominantly white institution within the fall semester
- Established bonds with advisors, students, and other societies to successfully lead academic society
- Developed business writing and paperwork skills such as Funding approvals and Constitutional Amending