Rowen D. Burney

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EDUCATION

University of South Carolina, Columbia SC **Graduating May 2025**
- MS in Mechanical Engineering GPA: 4.00
- BS in Mechanical Engineering GPA: 3.44

WORK EXPERIENCE

Engineering Intern, Fluor Corporation - Greenville, SC **May 2023-Aug 2023**
- Leveraged engineering judgment to streamline a Class 3 estimate for an international lithium mining project
- Applied regional and international standards to assess equipment noise emission, expediting site permitting
- Optimized conveyor angles, reducing site footprint by 87 meters and reducing equipment cost by $350,000
- Employed effective communication skills to secure proactive equipment quotes, mitigating information gaps and sustaining project timelines

Engineering Intern, Engine Power Source - Rock Hill, SC **May 2022-Aug 2022**
- Led an efficiency project to increase diesel power unit production to meet increasing client demands
- Designed subassemblies, conducted time studies, and created detailed work instructions to standardize production, decrease errors and improve efficiency by over 30%

Instrument Technician, OpTek Systems - Greenville, SC **May 2020-Aug 2020**
- Operated a laser cleaving machine to produce fiber optic filaments for use in medical devices
- Implemented a new production cycle which allowed for simultaneous manufacturing and quality control of glass fibers, resulting in doubled production and a 100% quality control rating

RESEARCH EXPERIENCE

McNair Aerospace Center, Graduate Researcher **Aug 2023-Present**
- Developed automated process planning functions for CAPP that allow for quick analysis and optimization of process planning in an intuitive way through graphical user interfaces

neXt Future Factories Visual Inspection Station **Jan 2023-May 2023**
- Created a custom image classification model using PyTorch, that identifies part defects and communicates them within a fully autonomous manufacturing cell

PROJECTS

Fluor Capstone Project **Aug 2022-May 2023**
- Competed in the Fluor design challenge to create a cost-effective, modular Clean In Place skid, ensuring 15 GPM water flow at 25 psi and a 10-degree per minute temperature rise under $2000
- Developed 3D models and technical drawings for a CIP skid, created assembly-focused instructions enabling precise cost estimates and structural analysis
- Delivered a single-attempt successful prototype, winning the Fluor design competition and delivering the only functional and under-budget entry

SKILLS

Languages: Python, Mathematica
Design Tools: CREO, CATIA V5, SolidWorks, VCP, Process Simulate