Chace Taylor Claborn

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Education

Auburn University	Master of Science in Interdisciplinary Engineering	August 2025 - Present
Auburn University	Bachelor of Science in Mechanical Engineering	3.79 GPA	August 2018 – May 2022

Skills

- Creo Parametric, Siemens NX, Solidworks
- SQL, Siemens 840D, Python, MATLAB, G-Code
- ITS Jira, Windchill PLM, Internal MES

- Manufacturing Ideology, GD&T, 3D Printing
- Instrumentation, Testing, R&D, Production
- Redash, Databricks, Tableau, Microsoft Office

Professional Experience

Blue Origin	Huntsville, AL	July 2022 to October 2025 (45-50 hours per week)

Component Manufacturing Engineer I-II

- Develop and update manufacturing work instructions and support the shop floor for BE-4 and BE-3U rocket engine components such as turbomachinery, valves, and various other components.
- Perform comprehensive engineering analysis and dispositions of non-conformances, applying advanced problem-solving techniques to ensure compliance with design specifications and production standards.
- Defines, develops, implements, and optimizes Hydroformed parts and equipment consisting of exotic materials, dies, and other supporting tooling; operates, troubleshoots, and programs recipes for new hardware.
- Utilize Python and SQL for data analysis, creating queries and scripts to identify trends, track non-conformances, and support manufacturing improvements (e.g., building dashboards and visualizations on Redash and Databricks)
- Apply Lean manufacturing principles to streamline workflows and drive continuous improvement, utilizing ITS JIRA to track team progress, manage tasks, and align objectives with operational goals.
- Track project milestones and collaborate with cross-functional teams to ensure on-time delivery of insourced components, driving vertical integration and enhancing production workflow.
- Created AI Agents, AI workflows, and leveraged Artificial Intelligence for querying, data analysis, and troubleshooting
- Started development on full-stack web-based applications like Turbo Build Book for subassembly processes.

Manufacturing Process Engineer II – Machine Shop

- Lead GD&T application and design-for-manufacturability feedback for turbomachinery, valves, and other engine components - reducing cycle time, minimizing non-conformances, and improving part Cpk values.
- Leverage CAD/CAM software to design custom fixtures and tooling, analyze CNC programs, redline engineering drawings, generate exploded assembly views—supporting efficient machining and enhanced part manufacturability.
- Drive machining process development and standardization for CNC operations in support of rocket engine hardware.
- Designed and implemented CNC probing routines and macros to streamline and automate setup processes, reduce manual intervention, and eliminate variation in critical dimensions.
- Led iterative NPI process refinement, utilizing root cause analysis and continuous feedback loops to optimize machining techniques and drive successful production outcomes.
- Collaborate with external vendors to implement cutting tool trials and enhance software (e.g., Vericut for CNC simulation, PLC programming for Hydroforming press) to improve machining precision and process efficiency.
- Organize best practices, conduct RCCAs, and facilitate knowledge transfer among machinists and programmers.

Aerojet Rocketdyne	Huntsville/Decatur, AL	May 2021 to August 2021 (40 hrs/week)

Systems/Test Engineer Intern

- Reviewed and updated Field Service Manuals that specified rocket engine test procedures for Atlas/Delta RL10.
- Monitored rocket engine testing & assembly to ensure procedures were followed and safety precautions were observed.
- Performed inspection of engine components, interfaces, and test configuration to ensure acceptability per procedures.

Precision Grinding Inc.	Birmingham, AL	May 2020 to January 2021 (36 hrs/week)

Process Engineer/Quality Inspector Intern

- Responsible for reading detailed drawings and close-tolerance part inspection of machined and fabricated steel parts.
- Wrote scripts for Hexagon Romer Arm on PolyWorks to inspect and reverse-engineer parts
- Documented inspection results and generated quality reports, applying GD&T controls for compliance.

WhiteFab Inc.	Birmingham, AL	May 2017 to Aug 2020 (2 hrs/week)

Machine Shop Department Intern – (Part-Time)

- Gained experience with CNC Vertical Machines, CAD, lathes, forklifts, overhead cranes, and fabrication of steel parts.