

Abby Bigaouette

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Aerospace-grade mechanic building a road to space. Extensive experience in high-impact design and multimedia production. Previously led the design team at Tahlequah Daily Press, where I coordinated editorial direction as well as newspaper and magazine production.

Experience

Subassembly Technician, Blue Origin 2024 - Present

- Assemble and test pneumatic, hydraulic, and monopropellant subassemblies for New Glenn's first stage.
- Installation of high performance insulation materials. (Cryogel-Z, SOFI, MLI, proprietary TPS materials)
- Operate in cleanroom and ESD controlled environments to preserve component cleanliness and system integrity.
- Certified in Laser Operation and part marking per AS478 and internal specifications.
- Perform precision drilling and machining operations on large structures.
- Interpret engineering drawings and 3D models in Creo.
- Perform avionics work including soldering, wire harness installation, inspections, and repairs.
- Contributed code bugfixes to internal software products.

Head of Design, Tahlequah Daily Press 2022 - 2024

- Coordinated editorial direction and production of the Tahlequah Daily Press and Claremore Progress.
- Designed two newspapers daily and 10 magazines yearly in Adobe Creative Cloud suite.
- Overhauled workflows, leading to an 88% greater ability to meet deadlines for daily print products.
- Managed social media following of over 38,000.

Multimedia Artist, Freelance 2017 - Present

- Dynamically applies skills to photography, graphic design, UI design, and 3D modelling.
- Utilizes versatile photography skills and editing techniques to capture compelling images within astronomy and aviation.

Projects

High-Power Rocketry 2019 - Present

- Utilizes novel construction methods to dramatically reduce the cost to build and fly high power rockets.
- Demonstrated rapid reusability by flying the same rocket twice in a 24-hour period.
- Designed, assembled, and debugged custom avionics PCBs.
- Level 2 High Power certified.

Liquid Propulsion 2023 - Present

- In development 1000N (225 lbf) IPA-nitrous engine.
- Fired a subscale hybrid motor, gaining experience handling nitrous, GSE design, and operation.
- Utilizes Onshape and OnScale for design and simulation.
- Creates detailed engineering drawings and work instructions for suppliers and assembly operations.

Skills, Awards, and Certifications

Skills: CAD (Autodesk Fusion, Autodesk Inventor, OnShape, Creo); 3D Printing (FDM, SLA, SLS); Welding (MIG, TIG); Rigging, Lifting; Composites Manufacturing (Fiberglass, Carbon Fiber); Precision Drilling; System Testing; Project Management; Programming (Python, C# .NET); Web Development (HTML, CSS, Svelte); AP Style; Adobe Creative Cloud (Illustrator, InDesign, Premiere Pro, Photoshop); Serif Affinity (Designer, Photo, Publisher)

Certifications: Laser Operator, Multi-Layer Insulation/MLI Installation, Cleanroom Entry and Operations, Hydraulic and Pneumatic Testing, ESD Protected Area (Blue Origin); Level 2 HPR (National Association of Rocketry)

Awards: Sequoyah Award, Oklahoma Press Association (2024); Newspaper of the Year, Best of CNHI Div. II (2024); Newspaper of the Year, Best of CNHI Div. III (2023)