

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
<ul style="list-style-type: none">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
<ul style="list-style-type: none">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
<ul style="list-style-type: none">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
<ul style="list-style-type: none">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
<ul style="list-style-type: none">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)