Brett Buchholtz

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Mechanical Engineer

10+ years of experience creating innovative design for consumer and automotive products from cradle to grave. Utilizes a broad skill set through a requirement driven design approach aiming to produce efficient, quality work on budget and on schedule. Focuses on building relationships with electrical, industrial design, software, firmware and manufacturing groups. Always excited to dive into new areas of design to become a versatile expert in product design.

Professional Experience

Facebook Reality Labs, Redmond, WA **2021-Current**
Senior Mechanical Engineer and Team Lead
Operate as lead of four engineers in the architecture and design of augmented reality products with a complex mechanism engagements between products and interesting user experiences for those interfaces. Specific focus on injection molded, sheet metal, and FPC design in NX.

Hyster-Yale Group, Fairview, OR **2019-2021**
Mechanical Engineer IV
Operate as a technical lead in the architecture and design of electrical systems for electric and internal combustion forklifts. Specific focus on sensors, harness, sheet metal and injection molded design in Creo.

Hewlett-Packard Inc., Vancouver, WA **2014-2019**
Mechanical Engineer IV
Design printers and perform a technical lead role to drive groups of various backgrounds to achieve timely, cost saving solutions to complex problems using Lean Design Processes. Specific focus on injection molded plastic, sheet metal, PCB and FFC design in Creo.

American Truck Wash, Missoula, MT **2013-2014**
Product Design Lead
Design industrial truck washes sold to large grocery store chains to be used to clean the exteriors and interiors of semi-trucks. Specific focus on welded steel, sheet metal, and electrical design in Solidworks.

Acuity Design, Missoula, MT **2012-2013**
Mechanical Engineer III
Design for motorcycle companies Indian and Victory. Specific focus on surface modeling, complex injection molded, cast and stamped steel parts with a focus on surface modeling using Pro-Engineer.

Integrated Engineering Solutions, Pullman, WA **2006-2012**
Mechanical Engineer III | Product Design Lead | Quality Assurance Engineer
Lead product designer of an innovative virtual reality product leading to acquisition by Intel. Also worked on manufacturing design analysis for Boeing 787 and virtual reality training for Sandia. Specific focus on design for CNC, simulation using Solidworks, Pro-Engineer Wildfire, Catia, Inventor and NX.

Relevant Projects

- Ongoing Project: Lead design team on architecture and integration of multiple devices into a single cohesive product. The product met all metrics for success ahead of schedule for launch.
- Ongoing Project: Design the mechanical interface between two critical products including mechanism design, magnetic design and the PCB's and FPC's for the project.
- Hyster ICE Truck Line: Led the design of critical electrical design architecture with the goal to make harnesses re-usable across multiple truck configurations. The reduced the number of cables in the product line led to an average cost reduction in each truck of $2000.
- HP Pagewide Pro Series: Led three engineers to develop the products output bin and page stop mechanism. The result was revenue of millions of dollars through improved performance.
- HP Pagewide Pro Series: Managed other engineers to develop electrical and laser welded sheet metal architecture of the stapling accessory. Resulting impact was sales revenue in the millions and cost reductions through manufacturing process improvements and reduced RMA rate by 3%.
- HP Designjet Series: Lead designer for all electrical and plastic structural architecture. Product went on to be extremely successful. My electrical architecture and design for assembly process reduced costs through manufacturing process improvements and reduced RMA rates by 4%.
- HP Sprocket Studio: Lead designer for all case parts and user experience. Drove dimensional part quality as well as cosmetic part quality. It is now the best reviewed HP printer on Amazon.
- Boeing 787: Led the simulation design for the production line using Catia and Delmia. The optimizations found resulted in a 10% increase in production capacity.
- Intel True VR: Led the product development for a panoramic 3D camera. This product resulted in the acquisition of the company by Intel ($13.3m) and appointment of executive jobs at Intel.

Technical Skills | Certifications | Awards | Volunteering

- **CAD Systems:** Siemens NX, Creo, Solidworks, CATIA, Inventor, Delmia, Teamcenter, Windchill
- **Key Skills:** Injection Molded Design, Sheet Metal Design, PCB and Cable Design, Design for Manufacturing, Design for Assembly, Finite Element Analysis, Surface Design, Drafting, GD&T - ASME Y14.5, Technical Leader, Testing and Analysis, Cradle to Grave
- **Other Software:** Adobe Photoshop, Keyshot, 3DSMax, Visual SourceSafe, Microsoft Office
- **Certifications:** Certified SolidWorks Professional
- **Awards:**
    - HP Vancouver Innovation Fair Winner 2018
    - HP Design Competition Winner 2016
- **Patents:**
    - US10009541B2: Apparatus and Method for Capturing Images
    - PCT/US2017/023818: Method for Controlling Slack of Dynamic Cable
    - PCT/US2017/044650: Spring Loaded Backstop for Media in Output Bin
    - PCT/US2018/055640: Heated Roller for Ink-Based Image Forming Apparatus
    - PCT/US2019/046496: Compliant Media Guide for Heating Element
- **Volunteering:** Oregon Food Bank

Education

B.S. Bachelor of Science Mechanical Engineering, Washington State University, Pullman, WA