

DEBORAH JESSUP

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Industrial Designer & Mechanical Engineer

Experienced industrial designer with a strong foundation in mechanical engineering, offering over 10 years of professional expertise. Equally adept with 5 years in the oil and gas sector, specializing in project management and process optimization, and over 6 years in the design and consumer product industry, focusing on innovative product development and user-centered design principles. Proficient in CAD modeling, prototyping, and cross-functional team collaboration. Seeking to apply creative solutions and strategic insights to drive innovation in industrial and product design within a forward-thinking organization.

KEY QUALIFICATIONS

- **Design Skills:** Research process, concept creation, consumer studies, affinity diagrams, formgiving, 3D modeling, 2D/3D rendering, prototyping, branding, creative facilitation, and photography
- **Software Skills:** Solidworks, Rhino 3D, Grasshopper, Fusion 360, Superslicer, Simplify3D, Figma, Sketch, InVision, Adobe Photoshop, Lightroom, InDesign, Illustrator, After Effects, Studio Max, Keyshot, Microsoft Office
- NCEES certified Professional Engineering License in state of Texas
- Fluent in English and Mandarin Chinese

PROFESSIONAL EXPERIENCE

Gantri

2021 - Present

Senior Industrial Design Engineer

As a passionate Senior Industrial Design Engineer, I thrive on bringing innovative, user-centric lighting products to life, from initial sketches to market launch. My expertise lies in bridging the gap between creative vision and tangible reality through efficient 3D printing and meticulous design for manufacturability.

- Own new product designs from inception to market launch, managing every stage from initial sketches to final production runs. I have a deep understanding of the design-to-production cycle.
- Design and optimize mechanical assemblies specifically for FDM 3D printing, maximizing efficiency and minimizing post-processing.
- Coordinate production trials closely with the team, overseeing print operations, finishing, and assembly for seamless execution.
- Analyze failures in existing products, identify root causes, and implement effective solutions in updated parts, ensuring continuous improvement.
- Develop innovative tools and SOPs to optimize workflows for the production team (manufacturing procedures), boosting efficiency and quality.
- Achieved cost reductions ranging from 35% to 45% on several key lighting products through strategic print and part count optimization. This translated to a significant sales margin increase of 25%-50%, directly contributing to our profitability and market competitiveness
- Managed the development and sourcing of new packaging solutions for our floor and table lights, focusing on sustainability, user-friendliness, cost-efficiency, and enhanced durability.

ActivePure**2020 - 2021****VP of Product Development**

Spearheaded ActivePure's B2C Expansion as VP of Product Development. I led the charge in launching ActivePure's first entry into the B2C market, driving the development of a cohesive line of air purifiers: a wearable, portable, and in-home unit, all united by a streamlined design language.

- Implemented user-centric design principles by conducting thorough user research to determine optimal CFM ratings and usability features. This ensured our products not only met but exceeded user expectations in terms of perceived and actual air purification effectiveness.
- Collaborated closely with the internal engineering team to navigate design constraints, emphasizing manufacturability and cost-effectiveness. Fostered strong partnerships with Chinese manufacturers to optimize production processes and achieve project goals efficiently.
- Led the initiative to establish a cohesive design language across the product line, enhancing brand recognition and instilling customer confidence.
- Accrued multiple patents for innovative design and engineering contributions.

Aires**2017-2019****Digital Product Designer (UX/UI)**

Performed comprehensive user research to understand client and transferee needs. Assessed the usability of Aires' current products. Facilitated design sprints and workshops to define requirements for new desktop and mobile applications. Developed wireframes, designs, and prototypes utilizing Sketch and InVision to visualize and iterate on concepts effectively.

- Created a new desktop application tailored for transferees.
- Established a design language library to maintain consistent UI across the company's product line.

Lunar Europe (Fluid Design) & Studio Schrofer**2014-2016****Industrial Design Intern**

Collaborated on interdisciplinary teams to transform concepts into final product designs across various industries. Utilized sketches, ideation, 3D modeling, prototyping, and both 2D and 3D renderings to refine projects. Contributed to the design of products ranging from medical technologies and smart wearables to computer server systems. Additionally, participated in the original design of diverse furniture types, including dining tables and chairs, outdoor patio furniture, and modular furniture solutions.

- Designed dining chairs and tables, that were sent to Thailand for production. Presented the dining chair model at the IMM Fair in Cologne, Germany.

BP**2007-2013****Subsea and Facilities Engineer**

Managed and supervised engineering contractors in executing equipment fabrication and implementation. Ensured adherence to safety, quality, and economic standards for products. Directed qualification processes for new subsea technologies at BP facilities. Led product trials addressing deepwater operational challenges. Assessed the operational value of new technologies through rigorous facility testing. Evaluated offerings from pipe mill companies, cladding vendors, and testing contractors to select optimal materials for BP projects.

- Served as engineering lead for materials and technology qualification of BP's Thunder Horse Flowline and Riser Reliability Assurance Project (TH FRRA).
- Designed a tool to remove and reinstall subsea buoyancy modules at 6000ft.

EDUCATION**Master of Science in Industrial Design Engineering // 2016**

Integrated Product Design Focus

Delft University of Technology

Delft, Netherlands

Bachelor of Science in Mechanical Engineering // 2008

Rice University

Houston, TX