

TUCKER OPPENHEIM

SENIOR PRODUCT DESIGN ENGINEER

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PROFESSIONAL SUMMARY

Product designer and design engineer with 7+ years developing physical hardware from requirements through CAD, prototypes, DFM, tooling, validation, and production. Strong in SolidWorks, Class-A surfacing, mechanical integration, molded-part design, tolerance work, and supplier coordination. Comfortable owning the product side of a problem through release and production support.

CORE EXPERTISE

Product development: Requirements, product architecture, CAD, prototypes, design reviews, validation, release and production support

Mechanical CAD: SolidWorks, Class-A surfacing, parametric parts/assemblies, drawings, tolerance stacks, PDM and multi-format releases

DFM / manufacturing: Injection molding and tooling, draft, undercuts, side actions, joining, supplier review, production handoff

Technical execution: Customer/supplier liaison, RFQs, MOQ and scrap assumptions, cost/schedule tradeoffs, corrective action

PROFESSIONAL EXPERIENCE

Scojet, Inc. | Industrial Designer

January 2020 - Present | Brunswick, GA

- Own product-development scopes from requirements and CAD through prototypes, DFM, supplier review, validation, customer approval, and production handoff.
- Develop complex SolidWorks parts and assemblies for molded and mechanical hardware, including Class-A surfaces, drawings, tolerance stacks, and multi-format releases.
- Use prototypes and fixtures to answer fit, assembly, performance, and manufacturing questions before committing to tooling.
- Work through product-side DFM with toolmakers and suppliers, including draft, undercuts, side actions, clearances, joining, materials, and tool changes.
- Turn customer feedback and supplier constraints into CAD revisions, prototype plans, sample/inspection actions, and realistic production schedules.
- Troubleshoot design and production failures by comparing samples, checking tolerance and component interactions, changing geometry or components, and retesting.
- Tie technical decisions to cost and schedule through RFQs, MOQ and scrap assumptions, freight and lead-time scenarios, and prototype-versus-tooling choices.

SELECTED PRODUCT DEVELOPMENT HIGHLIGHTS

- Designed and released injection-molded parts and assemblies that have reached hundreds of thousands of manufactured components across several commercial product lines.
- Designed and engineered products and accessories across several industries with about \$15M in sales over a two-year span.
- Redesigned a flagship product around existing mechanical architecture, avoiding an estimated \$1.2M in redesign and tooling cost and leading to follow-on work across the product line.
- Took a patented retention product from research and reverse engineering through CAD, prototypes, DFM, packaging, user documentation, validation, and production.
- Recovered inherited products by rebuilding assembly intent, checking tolerance and component interactions, testing revisions, evaluating tooling changes, and working with suppliers on corrective action.

Product Advancement Consultancy | Co-Founder, Industrial Designer

August 2018 - January 2020 | Boston, MA

- Developed client products through CAD, physical prototyping, DFM, iteration, and manufacturing handoff while balancing performance, cost, and fabrication constraints.
- Worked directly with clients, engineers, and fabricators to turn early concepts into manufacturable parts, assemblies, and production decisions.

EDUCATION & CERTIFICATIONS

B.S. Industrial Design, Wentworth Institute of Technology, 2018

CSWP - Mechanical Design (2022) | CSWPA - Advanced Surfacing (2021) | CSWA - Additive Manufacturing (2020)

TOOLS & METHODS

CAD / engineering: SolidWorks, PDM/release workflows, Geomagic Design X/Control X, KeyShot, Blender, Adobe Creative Suite

Prototyping / manufacturing: FDM, SLA, SLS, MJF, PolyJet and silicone casting; injection molding/tooling, CNC, sheet metal, casting, stamping and finishing specifications