Michael Metz | Design Engineer t: 507.581.6514 m.w.metz@gmail.com mmetzdesign.com

Objective:

Mechanical Design Engineer with twelve years experience of bringing product to market. Seeking to provide creative, functional solutions for bringing design concepts to reality, while fully considering the entire development process and product life-cycle.

Experience:

Senior Design Engineer: Ximedica, Minneapolis, MN

March 2021 — Present

Ximedica is a multidisciplinary medical device development consultancy headquartered in Providence RI, with a branch office in Plymouth MN. As a turnkey company, Ximedica brings products from initial concept to low volume production for testing.

Patents: EP3547964A1, EP3624739A1, USD845490, USD845489

Primary Tasks Include:

Designing novel solutions for clients, focusing on manufacturability, innovation, speed and reliability.
Managing multiple projects simultaneously, while interfacing with Mechanical Engineers, Industrial Designers, Electrical Engineers, and other disciplines to ensure all elements of a project come together into a manufacturable solution that solves the clients needs.
Create complex surface models and implement master modeling techniques to quickly build flexible CAD databases.
Participating in concept generation seasons with multidisciplinary teams to find innovative solutions for our clients.

Design Engineer: Ximedica, Minneapolis, MN

October 2015 — March 2021

Mechanical Design Engineer: Osterhout Design Group, San Francisco, CA

March 2014 — February 2015

ODG is a technology company headquartered in San Francisco, CA, working to bring Augmented Reality to the industrial and consumer market. As a Mechanical Design Engineer, I was responsible for designing product and working with vendors both locally and overseas to bring these designs to mass production. I also acted as the lead mechanical engineer to bring the preproduction design of ODG's Consumer Glasses to CES 2015.

Primary Tasks Included:

Used master model techniques to design family products that share common design elements and interchangeable components.
Worked with both local and overseas vendors to bring devices to mass production, including turn-key production.
Designed devices to meet Mil Spec and IP-67 ratings.

R&D Engineer: ApniCure Inc. Redwood City, CA

September 2012 — October 2013

Primary Tasks Included:

Designed prototype mouthpieces with SolidWorks Surfacing for the Winx Sleep System using a variety of soft and rigid materials.
Designed injection mold tooling for the in-house injection molder and testing fixtures for Verification Testing.
Wrote and executing FDA standard verification testing protocols and other supporting documentation such as Testing Reports, Manufacturing Process Instructions, Device History Reports, Equipment Qualifications, notebook studies, and Equipment and Component Specifications.
Built and testing new mouthpiece designs for clinical use.

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Experience:

Senior Design Engineer: Bogdan Co, Palo Alto, CA

January 2008 — September 2012

Primary Tasks included:

Researched and analyzing current market trends. Develop aesthetics and engineering designs for the functionality and manufacturing of products for the telecommunications, medical and consumer industries.
Took products from concept to preparation for manufacturing, including industrial and graphic design, engineering, prototyping and documentation.
Prepared part designs for various manufacturing processes such as injection molding, cast urethane and sheet metal, and CNC.
Designed, modeling and rendering all components in SolidWorks CAD.

Design Contractor: Speck Design, Palo Alto, CA

August 2008 — November 2008

Primary Tasks Included:

Participated in Marketing, Design and Sales cross-functional teams to develop the company's visual identity and incorporating it into all levels of business.
Partnered with Designers in all areas of product development, model making and mock-ups.
Worked with clients on product graphics.

Design Intern: Speck Design, Palo Alto, CA

February 2008 — August 2008

Primary Tasks Included:

Designed and constructed a permanent exhibit to showcase designs in the company headquarters.
Assisted Designers in model making, mock-ups, presentations and other tasks.

Industrial Design Internship: 3M SEMS Division, St. Paul, MN

June 2006 — August 2006

Received the 'Going the Extra Mile' (GEM) award from 3M management.
Responsible for designing aesthetics and user interfaces for "Smart Library Systems" testing them in the human factors lab, and presenting my findings with the refined designs to the project division heads.
Produced concepts, renderings and presentation models for the Marketing Department.
Responsible for heading up the initial style research, and assisting on form generation with the Design team.

Education:

Rochester Institute of Technology, Rochester, NY

September 2003 — May 2007

BFA in Industrial Design with honors
AAS in Graphic Design with honors
Concentration in Environmental Studies
GPA: 3.460

Skills and Training:

Digital

Proficient in SolidWorks (surfacing, sheet metal, rendering), PDM, Photoshop, Illustrator, Acrobat, Microsoft Office, Windows and Macintosh Operating Systems.

Physical

3D sketching, design research, sourcing, verification testing, model making, rapid prototyping, brainstorming, rapid idea generation, sewing