

# JOANNA MA

USER-CENTRIC BIOMEDICAL ENGINEER

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## EXPERIENCE

### Mechanical Engineer, Project Manager

*Cypre, Inc.*

JULY 2017 – AUG 2018

San Francisco, CA

Worked at the intersection of hardware, software and cell biology to help pharmaceutical companies and research institutions create advanced 3D cell models for drug discovery, translational and clinical research.

- Helped bring 6 functional bioprinters and accessories from concept to production in 9 months
- Led team meetings and design reviews to develop project plans and product requirements
- Coordinated with manufacturing vendors to ensure components arrive on time and according to specifications
- Fabricated, developed and troubleshoot mechanical, electrical and firmware components
- Established procedures for assembly, quality control and shipping to track inventory, improve workflow, and oversee distribution of products
- Designed robust product packaging, labels and user instructions

### Design Engineer

*Freelance*

MAY 2015 – PRESENT

Oakland, CA

Working with local entrepreneurs to bring their design concepts to life.

- Created 3D layouts in SketchUp of modular production facility for rural Alaskan communities
- Built cost-efficient display prototypes for electric vehicle charging stations with LEDs, OLED panels and Arduino

### Research Associate

*Orthopaedic Trauma Institute*

MAR 2015 – MAR 2016

San Francisco, CA

Evaluated novel orthopaedic technologies for medical device companies, surgeons and research institutions to prepare for clinical regulatory submissions and potential clinical use.

- Designed and executed custom ISO standard biomechanical tests for clients to verify mechanical properties of novel medical devices and surgical techniques
- Built testing fixtures for use in servohydraulic testing machines
- Prepared tools and operated mobile C-arm x-ray for training sessions with clinicians, nurses and sales representatives in the Surgical Training Facility

### Community Manager & Designer

*Dance4Healing*

NOV 2014 - DEC 2015

Sunnyvale, CA

Managed logistics and led outreach for ongoing dance programs for cancer patients. Recruited, scheduled and on-boarded patients, dance teachers and filmmakers for weekly classes.

- Optimized company business model, program and platform through user surveys, financial projections, and research into integrated technologies
- Conceptualized the virtual dance experience with high-fidelity prototypes
- Led crowdfunding campaign and raised \$3k for future programs

### Interface Designer & Content Associate

*Confihealth*

JAN 2014 - FEB 2015

Burlingame, CA

Created a unique online shopping and educational experience for first-time parents to discover baby tech products. Collaborated with a small team of developers, designers and content strategists to curate over 300 products and educational articles, including writing original content.

- Designed high-fidelity prototypes and user research study to drive direction for the product and business

### R&D Engineer

*NanoNerve, Inc*

SEPT 2012 - JULY 2013

Berkeley, CA

Collaborated with neurosurgeons, clinicians, regulatory advisors and potential strategic partners on verification & validation testing, mechanical benchtop testing, manufacturing, and clinical regulatory submissions to deliver nano-patterned grafts to market.

- Developed ASTM standard testing setup to demonstrate burst strength of dural grafts
- Optimized nerve guide and dural graft fabrication for scale-up manufacturing
- Conducted one-week market test to assess dural graft market and developed a go-to-market plan to reach neurosurgeons as early adopters

## EDUCATION

### MS in Bioengineering, Translational Medicine

*University of California, Berkeley and San Francisco*

JULY 2013

### BE in Biomedical Engineering

*The City College of New York*

JUNE 2012

## SKILLS

Product Development  
Verification & Validation Testing  
Early-Stage Production  
User Research  
Usability Testing  
Project Management

## TOOLS

### HARDWARE

Machine shop tools, Rapid prototyping (3D printing, laser cutting, silicone cast molding, Arduino)

### SOFTWARE

SolidWorks, MATLAB, LabVIEW, OpenSim, ImageJ, Arduino, Git

### UX/UI DESIGN

UXPin, InVision, Axure, PowerPoint, Adobe Illustrator

### PROJECT MANAGEMENT

Asana, Instagantt, Trello

## HONORS & AWARDS

MAY 2018

Bertelsmann Data Science Challenge Scholarship, Udacity

JAN 2018

Grow with Google Developer Challenge Scholarship, Udacity

MAY 2017

Oakland Indie Award Nominee for Innovative Newcomer, It's Jo Cake!

MAR 2016

Bits + Blocks Makeathon Participant  
IDEO

APRIL 2012

New York EIT Certified #089253

## INTERESTS & HOBBIES

FIRST Robotics Mentor, Team 4159  
Founder, It's Jo Cake!  
Rock climbing