

# ALANA YOEL

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## PROFILE

Mechanical engineer with focus on DFM, early stage production, and establishing functionality across multiple systems. I'm a full-stack hardware engineer, leveraging a unique background and extensive experience with CAD, CAM, CNC machining, and DFM to rapidly develop products that are ready for production. My artistic sensibility and robust engineering skills are uniquely valuable for robotics, consumer products, and wearable tech/fashion tech.

## EDUCATION

**Carnegie Mellon University**, Pittsburgh, PA

B.S. in Mechanical Engineering, B.S. in Cognitive Science with Concentration in Robotics, Science, and Humanities Scholars Program, May 2011

## EXPERIENCE

**Pneubotics, Inc/Canvas Construction**, Robotics Engineer, Jan 2016 - Present

- Hardware Technical Lead for main robot system
- Key strategic collaboration on timeline and management of our engineering team
- Designed component/subsystems for pneumatically driven, compliant robots
- Prototyped metal and plastic parts for robot build using a variety of methods
- Simple Solidworks FEA analysis for mechanical components and subsystems
- Managed vendor relations for a variety of small run, highly specialized parts
- Established and improved systems for assembly, infrastructure, data management, and overall team operations

**Other Machine Company (now Bantam Tools)**, Manufacturing Engineer, Mar 2013 - Sept2015

- Experience with full hardware development lifecycle, from concept design through to production
- Helped establish and improve an assembly line and related systems for delivery of 25 units/week
- DFM/CNC programming for production and prototype parts
- Led QC initiatives for production parts, leading to familiarity with multiple metrology tools
- Designed and manufactured custom quality control tools
- Designed fixturing solutions for machined parts
- Developed sourcing strategies and supplier partnerships
- Built Bay Area-based supply chain for flexibility and quick turnaround production

**Agent of Presence**, Co-founder & Director of Technology, May 2011 - Dec2012

- Managed team of electrical engineers, product designers, and leather artisans to produce company's first product: an illuminated handbag
- Utilized CAD & rapid prototyping to design components for reliable integration of hard and soft components
- Coordinated timelines, created organizational infrastructure, led QC initiatives
- Designed the LED & fiber-optic coupling system in a heartbeat dress project:  
[thecreatorsproject.vice.com/blog/introducing-a-dress-that-responds-to-your-heartbeat](http://thecreatorsproject.vice.com/blog/introducing-a-dress-that-responds-to-your-heartbeat)

## PROJECTS/ LEADERSHIP

**Modular Snake Robotics**, Carnegie Mellon University, Summer 2009-Winter 2010

- Designed end effectors for snake robots (used in search and rescue applications)
- Developed portable control case to allow operation of the robot outdoors

**Agnes Irwin School 'Femme Tech Fatale' Robotics Team**, Team Leader, 2003-2007

- One of only two all-female teams (at the time) in the FIRST organization

**Kappa Kappa Gamma**, Philanthropy Chairman, Standards Committee, 2009-2011

## SKILLS

**Software:** SolidWorks, HSMWorks, Autodesk Inventor/Fusion360

**Machines:** CNC Mill/Router (mainly Haas), Waterjet, Laser Cutter, General wood and metal shop tools

**Languages:** Armenian, basic French