

# Luke Liechty

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## IN A NUTSHELL

I am a diverse, technically skilled designer with an extensive background as a two-wheeled mechanic and several years of in-depth experience in quality and manufacturing engineering for new product development as well as automated quality control systems design. I am self-motivated and detail-oriented, yet have an eye for high-level systems thinking. I am devoted to proliferating sustainable design and re-thinking the deeply engrained systems that stand in the way of a sustainable future.

## SELECTED SKILLS

- Innovative designer and sustainability thinker
- Accomplished TIG welder, comfortable with oxy-acetylene welding/brazing; I know my way around lathes, mills, and general shop tools. Special affinity for bench grinders.
- I also know my way around Arduinos, Teensys, and sensors
- Adept at SolidWorks, familiar with Fusion 360
- Proficient with Minitab, Adobe, KeyShot, and L<sup>A</sup>T<sub>E</sub>X
- Experienced with 3D printing, laser cutting, and textiles, electronics, and rapid prototyping
- Strong mechanical sense and mathematical aptitude
- Firm grasp over quality statistics, GR&R studies
- Spanish: advanced verbal, intermediate written

## SCHOOLS I HAVE LEARNED FROM

**Stanford University**, *Palo Alto, CA*

June, 2021

M.S. in Engineering, Design Impact

Thesis project is dedicated to designing products and services that facilitate decentralized, broadly scalable, community-driven urban composting of food scraps. Experienced in design thinking, human-centered design, needfinding and problem definition, experiment design, smart product design, mechatronics, manufacturing methods.

**Reed College**, *Portland, OR*

May, 2014

B.S. in Physics

Thesis work explored Stirling engines and small-scale power measurement. Coursework included advanced electrodynamics, classical and quantum mechanics, general relativity, multivariable calculus, logic, ethics, and philosophy of science.

## TALKS I HAVE GIVEN

Liechty, L. & Miller, R., (2017). Real-time Process Controls Across the Ocean. Presented at the WESTEC Conference, Los Angeles, CA.

## JOBS I HAVE LEARNED FROM

**Product Technician**, Boa Technology, Inc., *Denver, CO*

Feb 2018 - July 2019

- Performed root cause analysis on reported product failures. Developed and managed test and corrective action plans.
- Designed and qualified gauges, fixtures, and optical CMM programs for validating precision plastic parts.
- Managed the implementation of advanced quality tools at contract manufacturers in Asia, including employee training and gage repeatability and reproducibility studies.
- Took ownership over engineering drawings and manufacturing documentation for multiple product suites.
- Bridged the gap between sales, engineering, and customer support teams; can juggle balls as well.
- Travelled to Asia to assist with hiring and training new employees.

- Engineering Technician**, Boa Technology, Inc., *Denver, CO* Oct 2015 - Feb 2018
- Planned and executed the design and implementation of a real-time, automated quality control system that reduced production costs by \$80K per year, per product suite.
  - Travelled to Asia multiple times to conduct supplier audits, new quality control systems implementation, and training for contract manufacturer employees.
  - Assisted with the validation of plastic injection molds.

- Manager**, The Singletrack Factory, *Scottsdale, AZ* Oct 2014 - Jul 2015
- Managed sales, inventory, purchasing, repairs, and harder than all, people.
  - Designed and constructed merchandise displays, bicycle storage solutions, and workshop layouts.
  - Managed the store to self-sufficiency before handing over management.

- Mechanic**, The Singletrack Factory Bicycle Shop, *Denver, CO* Feb 2008 - Sep 2014
- Troubleshoot mechanical issues, and made them disappear. Particularly enjoyed rebuilding hydraulic systems.
  - Forged and maintained robust customer relations through clear communication and high-quality work.
  - Known as “The Kid,” my standards were and remain anything but childlike.

- Co-Founder**, Backyard Bike Shop, *Denver, CO* May 2007 - Aug 2007
- Opened a full-service, neighborhood bicycle repair business in a home garage.
  - I was a kid, I had passion, and though the shop was a failure, it got me my first real job.

#### ADDITIONAL ASSETS AND DISTINCTIONS

- National Merit Scholarship Finalist, 2010
- 3rd place overall, US Junior Solo Bagpipe Championships, 2008
- Freelance bagpiper, sometimes seen, and most definitely heard, on street corners