

EXPERIENCE

Fremont, CA

TESLA

5/21 – present

— **Sr. Manager, Solar Products Engineering**

5/19 – 5/21

— **Manager, Solar Manufacturing Engineering**

2/17 – 5/19

— **Staff Solar Manufacturing Engineer**

9/15 – 2/17

— **Sr. Solar Module Equipment Engineer** (at SolarCity before acquisition by Tesla)

- Currently manage an organization of 80+ engineers and technicians responsible for all solar-related engineering work at Tesla: research & development, product design, applications engineering, tooling engineering, data analytics, manufacturing engineering, and reliability & test engineering
- Previously managed a team of engineers responsible for design, development, and deployment of novel manufacturing equipment and processes for Tesla's unique Solar Roof architectural photovoltaic product
 - Lead the team to successful deployment of over \$50MM of first-of-its-kind capital equipment in Tesla's Gigafactory New York, on schedule and under budget
 - Interim manager for production, maintenance, technical writing, and NPI teams during initial ramp
 - Installed and qualified new machinery at pilot and production facilities, improving yield, throughput, and other metrics until acceptable for handoff to operations teams
 - Partnered with industrial engineers to define factory layouts for optimal throughput and density
- Served as principal contributing engineer for Tesla's proprietary cell connection equipment, which cleaves and overlaps solar cells to increase module efficiency and improve aesthetic appearance

Santa Clara, CA

MIASOLÉ

9/14 – 9/15

— **Hardware Development Engineer III**

4/13 – 9/14

— **Hardware Development Engineer I**

- Designed, built, and maintained electromechanical tools for fabricating lightweight, flexible solar modules, driving ramp-up of factories from manual builds to automated assembly
- Oversaw progress of outside automation vendors to design and deploy large-scale manufacturing tools
- Drove cross-team collaboration between process scientists and hardware engineers
- Installed and supported custom manufacturing equipment at overseas factory locations

San Jose, CA

NANOSOLAR

8/12 – 4/13

— **Research and Development Equipment Engineer**

- Collaborated with R&D scientists to design and implement new mechanical, electrical, and software elements of lab tools, used for making and studying thin-film solar cells printed on a flexible substrate
- Maintained and improved existing tools in order to increase cell yield and average batch efficiency
- Developed and demonstrated processes for next-generation efficiency improvements on pilot line

EDUCATION

Palo Alto, CA

STANFORD UNIVERSITY

9/11 – 6/12

— **M.S. in Mechanical Engineering**, specializing in **Mechatronics**

9/07 – 6/11

— **B.S. with Distinction in Engineering Physics**, specializing in **Electromechanical Systems**

- Coursework: mechanical engineering, classical & modern physics, management science, technical writing
- Stanford in Berlin, *Spring 2010*
- **GPA: 3.97/4.00 (B.S.), 3.86/4.00 (M.S.)** — Member of Tau Beta Pi Engineering Honors Society

SKILLS

Proficient:

3D CAD (SolidWorks), factory layouts (AutoCAD), Microsoft Office, lifecycle management (Agile, Enovia, etc)

Familiar:

SCARA and articulated robot programming (Adept, Yaskawa, etc), machine vision systems (Omron, Keyence, etc), Matlab, C, C++, C#, Visual Basic, Java, LaTeX

ADDITIONAL INFORMATION

- Two **patents granted** and multiple **patents pending** from work at Tesla for equipment, process, and product design.
- **Freelance Science Writer** for Shmoop, an educational website supplementing high school classes. Wrote humorous, engaging, and informative physics chapters, including content explanations and example problems (3/13 – 4/14).
- **Published** in *Leland Quarterly*, Stanford's student literary magazine (*Spring 2010, Winter 2011, Spring 2012*), with one piece selected for *plain china*, Bennington College's anthology of the year's best undergraduate writing.