

# Trina Vana

trinavana@gmail.com | www.trinavana.com

## WORK EXPERIENCE

*Senior R&D Engineer II* July 2020 - Present  
*Senior R&D Engineer* July 2019 - July 2020  
*R&D Engineer* February 2018 - July 2019

Alcon (formerly PowerVision, acquired March 2019), Belmont, CA

- Leading the cross-functional effort of building out a R&D pilot line; activities include facilities planning, coordinating materials and equipment procurement with both internal teams and external vendors, and advanced manufacturing process development and optimization
- Informing data-driven design decisions with FEA simulation and analysis of data sets in Python
- Developing metrology software in LabVIEW and architecting data flow to associated databases using SQL and Microsoft Access; overseeing subsequent deployment for use in production
- Improving manufacturing throughput with redesigned parts and tooling for injection molding
- Facilitating usability work with the design of custom eye models, wet lab evaluation of design changes, collaboration with ophthalmic surgeons to understand workflow preferences, and organization of formal studies with a third party market research firm

*Mechanical Design Engineer*

June 2017 - January 2018

*Mechanical & Manufacturing Engineer*

September 2016 - June 2017

Zap Surgical Systems, San Carlos, CA

- Managed systems integration projects between electrical, mechanical, and industrial design teams
- Designed tooling to ensure reliable manufacture of custom machined, casted, and stamped parts
- Produced Solidworks CAD models and drawings employing GD&T and tolerance analysis on assemblies with complex, 500+ dimension parts
- Led design and verification of 3 degree-of-freedom patient table system with Solidworks Simulation
- Transferred R&D to production by establishing Solidworks PDM workflow, producing work instructions, and managing partnerships with local and international vendors in China
- Drove 510K readiness effort by maintaining and updating a 3300+ part BOM, developing and implementing test protocols, and drafting design verification reports

*Engineering Intern*

May 2015 - August 2015

Radical R&D, Portland, OR

- Established safety parameters for spinal surgery devices referencing IEC 60601
- Distilled client specifications and produced early product concept prototypes
- Determined skin adhesive solution for a small sensor device by identifying viable products, drafting formal test protocols, and executing test plan

*Customer Success Representative*

April 2013 - May 2014

Box, Los Altos, CA

- Resolved 80+ weekly technical product issues through email, phone, and screen share
- Collaborated with internal teams in engineering, product management, and design to address broader product issues and steer future product development
- Trained and mentored new hires as a member of a select on-boarding leadership team

## EDUCATION

UCLA, *Master of Science*

June 2016

Mechanical Engineering, emphasis in Design, Manufacturing, and Robotics

UC Berkeley, *Bachelor of Arts*

December 2012

Molecular & Cellular Biology, concentration in Neurobiology

## KEY SKILLS

Solidworks, ProE/Creo, COMSOL, Abaqus, MATLAB, LabVIEW, Python, Microsoft Office suite, Microsoft Access, LaTeX, Adobe Creative Suite, Arduino, HTML/CSS, mechanical design, project management, hands-on prototyping, DFX, process development, test method development, data analysis, SQL, technology transfer