

Van (Vivian) Duong

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SUMMARY

Detailed-oriented Mechanical Engineer with 5+ years of professional and startup experience in consumer products, alternative energy, EV battery and semiconductor. Seeking opportunities in CAD modeling, prototyping, design (i.e. product, equipment, tooling, fixtures) and development, R&D, manufacturing, and testing.

EDUCATION

University of California at Merced

M.S. in Mechanical Engineering, Aug 2015

- Thesis: Minichannel-tube solar thermal collectors for low to medium temperature applications
- B.S. in Mechanical Engineering, minor in Environmental Science and Sustainability, May 2012

WORK EXPERIENCE

Mechanical Engineer

Aug 2020 – Present

Production Robotics – San Leandro, CA

Mechanical Engineer II

Sept 2019 – June 2020

Kinestral Technologies – Hayward, CA

- Designed custom fixtures, tooling, and equipment to assist process engineering in data collection, measurement, inspection, and testing of product.
- Upgraded existing tools and equipment on the product development line to accommodate new material.
- R&D new and cost-effective upgrades on product line, as well as redesigned and created prototypes cables and components for low-cost mass manufacturing.
- Designed new connector systems and cable assemblies for flexibility, ease of product installment and to reduce material cost in mass manufacturing. Communicated with vendors about design feasibility and complete turnkey capabilities.

Mechanical Engineer

Feb 2019 – July 2019

CLEARink Displays – Fremont, CA

- Designed high capacity rollable racks to be used in high vacuum chambers for display coating processes, saving up to 80% of total costs for each run compared to previous immobile rack.
- Aesthetically designed demo cases and kits encasing CID displays to be demonstrated and presented at conventions (i.e. SID Display Week) and meetings; CID won Display Week 2019 People's Choice Award.
- Designed and printed tools and jigs in-house for lab and clean room using 3D printing (FDM, SLA) and urethane casting and molding.
- Troubleshooted and introduced new equipment to integrate new processes.
- Collaborated with different teams to design and develop in-house mechanical systems to capture and analyze failure and reliability of display samples.

Mechanical Design Engineer

Sept 2018 – Nov 2018

Portable Power Innovations – San Jose, CA

- Collaborated with engineering team to design EV battery modules and packs. Built, assembled and troubleshooted EV battery prototypes under strict deadlines

Mechanical Design Engineer

April 2017 – July 2018

Pentagon Technologies – Hayward, CA

- Managed and worked on products from start to finish from concept to design, built and tested prototypes, documented product. Communicated with vendors. Worked with production team to increase efficiency by identifying and troubleshooting any issues.
- Redesigned custom fan filter units (product) to reduce manufacturing and material costs by 20% and to minimize assembly time.
- Created 3D CAD models and detailed drawings for quoting, manufacturing, and production.
- Developed technical specification sheets, procedures, assembly instructions and SOP.
- Utilized SolidWorks Flow Simulation to study air flow in probe prototypes for Pentagon Technologies Surface Particle Counters (product), as well as fan filter unit prototypes.
- Developed document control and release process/program for the Products Group. Setup and administrated PDM for engineering and design team for project management, revision control and archiving.

Installation Design Support Engineer

Jan 2016 – Mar 2017

Aerotek, Randstad @ Bloom Energy - Sunnyvale, CA

- Managed, created, and released all site installation related BOMs and part numbers.
- PDM admin for site workflows; modified and managed multiple workflows in SolidWorks PDM.
- Collaborated in developing an organized and centralized workflow process and program in Agile PLM to manage energy server (solid oxide fuel cell generator) installation projects from start to finish.
- Assisted Process Engineering group in running experiments to investigate the causes of cracks/failures, hardness quality and effects of seals in fuel cell stacks.

Graduate Student Researcher

Aug 2013 – Aug 2015

Diaz Research Group, University of California at Merced

1. Project: Copper-based minichannel (MC) solar collector

- Designed a novel copper-based MC tubes solar thermal collector prototype for experimentation to study steam generation and two-phase flow in MC tubes. Developed a mathematical and computational model of two-phase flow in MC tubes calculating pressure drop and heat transfer coefficient.

2. Project: Aluminum-based minichannel (MC) solar water heater (SWH)

- Compared the seasonal performance of an aluminum-based MC tubes SWH versus conventional copper flat-plate solar SWH.

CERTIFICATION

- EIT - California BPELSG, License# EIT 149298, May 2013
- CSWP – Certified SolidWorks Professional – Mechanical Design, ID# C-E6PS9K5BZV, May 2020

RELEVANT SKILLS

- Programming: Engineering Equation Solver (EES), R, HTML, CSS, familiar with MATLAB,
- CAD: SolidWorks, some experience in AutoCAD and DraftSight
- Simulation: SolidWorks Flow Simulation
- Lab/Research: data collecting/analysis, familiar with LabView
- Word Processing: LaTeX, Microsoft Office, OpenOffice, Google Suite
- Other: Solidworks PDM, Confluence, Arena, QuickBase, SalesForce, Axapta, JIRA, Agile PLM
- Languages: English, Cantonese (conversational)