
PROFESSIONAL EXPERIENCE

Mechanical Engineer II	Illumina	Jan 2022 - Present
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- Developed IoT laser distance tool, with a custom PCB & C++ code, recording accurate measurements to a CSV.
- Achieved reduction in labor-intensive process from 4 techs & 8 hours to 1 technician & 10 min using laser tool.
- Piloted software upgrade as system tester & collaborated with stakeholders to elicit requirements & feedback.
- Revised PLC code and conducted software testing and validation on Beckhoff PLCs for optimal performance.

Systems Integration Engineer	Hewlett Packard Inc	March 2021 – Dec 2021
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- Created ink delivery system providing stable flow and accurate measurements for ink and pen development.
- Achieved 50% reduction in startup time through improved thermal distribution and PID controller for test bed.
- Developed a Python script to analyze and visualize thermal data values from an infrared camera (IR).
- Revamped legacy tool improving flow rate for the ink delivery system test and hysteresis in tool components.

Robotics Deployment Engineer	Amazon Robotics	July 2020 – Nov 2020
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- Reduced Amazon Robotics site production errors by 20% and exceeded launch deadline expectations by 30%.
- Implemented, configured, and deployed Alley Bradley software for robotic safety systems and Cognex Vision.
- Validated & verified all robotic installations met requirements in a regulated and controlled environment.
- Originated automation solution for robotic drive awakening process and reduced process time by over 50%.

Hardware/Systems Lead, Capstone	Glaukos	Sept 2019 – May 2020
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- Fabricated proof of concept for a periorbital simulator to enhance fatigue testing for product development.
- Formulated Design of Experiments (DoE) to ensure strong repeatability and efficiency of test fixture.
- Developed and automated data collection and testing processes from a load cell with an ADC, Arduino & DAQ.
- Validated stability of material and design choices with finite element analysis simulation on test fixture.

EDUCATION

Los Angeles, CA	University of California, Los Angeles	Sept 2022 – Dec 2024
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- MS Systems Engineering – Concentration in Embedded Systems, GPA: 4.0

San Diego, CA	University of San Diego	Sept 2016 – May 2020
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- BS/BA in Mechanical Engineering – Dean's List First Honors, May 2020.
- Undergraduate Coursework: Computational Fluid Dynamics (CFD), Finite Element Analysis (FEA), Introduction to Robotics, Human Factors Engineering, Machine Shop Practices, Manufacturing Processes, Fluid Mechanics.

PROJECTS

- **Spinal Surgery Tool** (2021). Designed interbody and inserter tool for posterior lumbar interbody fusion (PLIF) accommodating for insert-and-rotate procedure with mechanism design for cleaning and biocompatibility.
- **R&D Controls Engineer, Intern, Philips Respironics** (2019). Improved QA process time by 80% through creation of automated test fixture for ventilator control algorithms using National Instruments cDAQ and LabVIEW.
- **Wobbler Engine** (2018). Awarded a 3rd finish with a minimum running psi of 1.3. Wrote detailed operation sheets, fabricated, and assembled all components for the wobbler engine.
- **Tension and Compression Model** (2018). Conceptualized learning aid that provides a physical representation of tension and compression in a truss system. Produced via 3D prints and implemented into Statics courses.

LANGUAGES AND SKILLS

- Applications: ANSYS Fluent | Creo Parametric | CAMEO | Github | MultiSim | Solidworks | SysML/UML |
- Programming Languages: C++ | Beckhoff/TwinCat | Java | LabVIEW | MATLAB | Python | R