

---

## PROFESSIONAL EXPERIENCE

---

<b>Equipment Engineer</b>	<b>Illumina</b>	<b>Jan 2021 - Present</b>
---------------------------	-----------------	---------------------------

- Conducted investigation on DNA synthesizer fault and implemented procedure to minimize production failure.
- Redesigned oligo synthesis modifier containment units to reduce technician installation time by 40%.
- Assessed capacitive liquid level detection error with engineering study & assisted with design of experiments.
- Data-mined large data sets to uncover source of systematic error for CLLD error on automated liquid handler.

<b>Systems Integration Engineer</b>	<b>Hewlett Packard Inc</b>	<b>March 2021 – Dec 2021</b>
-------------------------------------	----------------------------	------------------------------

- 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.

<b>Robotics Deployment Engineer</b>	<b>Amazon Robotics</b>	<b>July 2020 – Nov 2020</b>
-------------------------------------	------------------------	-----------------------------

- 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%.

<b>Hardware/Systems Lead, Capstone</b>	<b>Glaukos</b>	<b>Sept 2019 – May 2020</b>
--	----------------	-----------------------------

- 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

---

<b>San Diego, CA</b>	<b>University of San Diego</b>	<b>Sept 2016 – May 2020</b>
----------------------	--------------------------------	-----------------------------

- 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.
- Involvements: Theta Tau Professional Engineering Fraternity, American Society of Mechanical Engineers.

---

## 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 3<sup>rd</sup> 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 | Agile | Creo Parametric | Git/Github | LabVIEW | MultiSim | Solidworks & PDM
- Programming Languages: C++ | Java | MATLAB | Python