BRANDON VISITACION

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EDUCATION

San José State University **May 2022**
Bachelor of Science, Mechanical Engineering, Magna Cum Laude GPA: 3.79

RELEVANT SKILLS

- SolidWorks/Solidworks PDM, Arena (PLM), Python, MATLAB, ACS Motion Control, 3D Printing, Atlassian, Arduino, Basic Machining, Microsoft Office (Excel, Outlook, PowerPoint, Word)

WORK EXPERIENCE

Ultima Genomics ***Fremont, CA***
Systems Engineer II *December 2024 - Current*
- Modeled and manufactured tooling parts for qualification, calibration, and part protection in SolidWorks
- Created test benches and automated scripts to qualify subsystems before installation and generate reports
- Documented subsystem BOMs, SOP, and pushed ECOs for reliable validation and reduced bring up time
- Developed geometry for multilayered bonded fluidic manifolds to enable homogenous reagent mixing

Ultima Genomics ***Newark, CA***
Systems Engineer I *August 2022 - December 2024*
- Built & scripted automated robotic handler wafer loading test benches to increase chemistry R&D output
- Worked with software team to ensure retrofitted subsystems were integrated without collision risks
- Root caused errors in hardware, software, handler motion, and fluidic control during sequencing runs

Ultima Genomics ***Newark, CA***
Systems Engineer Intern *Summer 2020, 2021*
- Performed validation and verification tests on syringe pumps and flow/pressure sensors
- Communicated with vendors to find sensors to be incorporated into a fluidics cabinet

ALEF ***Santa Clara, CA***
Mechanical Engineer Intern *January 2021 – May 2021*
- Carried out carbon fiber layups on 3d printed shells for the main chassis body
- Designed mounts in SolidWorks for motor controllers to be attached to the electric flying vehicle

ENGINEERING PROJECTS

Low-Cost Medical Ventilator
- Reworked a previous ventilator assembly to use OTS parts for ease of manufacturing and cost reduction
- Designed a PCB to simplify routing sensors and other electrical components to the microcontroller
- Signal conditioned pressure sensors with multiple ICs to achieve a higher and more accurate resolution

Self-Balancing Robot
- Created state-space model to obtain external outputs of the robot to be fed back into a closed-loop system
- Used MATLAB and Simulink to create a full-state feedback controller with a Linear Quadratic Regulator
- Obtained accurate fast changing angular data with a complimentary filter for an accelerometer & gyroscope

Belt Driven Variable Sunglasses
- Developed 3D printable sunglasses with adjustable polarization lenses in Fusion 360
- Utilized a timing belt to synchronize the polarity between both lenses

CLUB ACTIVITY

San José State University Baja SAE **San José State University**
Chassis Subassembly Team Member *August 2019 - December 2020*
- Collaborated with chassis sub team to model different parts for the main body of the car with SolidWorks
- Worked in the machine shop to fabricate and assemble various parts of the car chassis