Siddharth Kurwa

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EDUCATION

B.S., Mechanical Engineering with Highest Honors, GPA: 3.97/4.00 **Dec 2018**

- Bridges to the Future Credential Program: Design and Manufacturing Track
- Cockrell School of Engineering, The University of Texas at Austin

EXPERIENCE

Associate Equipment Automation Engineer, Tesla **Feb 2019 - Present**

- Generated material and labor savings of approximately $600,000/year by conceiving 5 automation process improvements, programming in PLC, and analyzing production floor data to measure value-add
- Provided automation equipment support to solve time-critical production issues involving process logic and state machine sequencing, sensors, programmable logic controllers (PLCs), and IO modules

Engineering Intern, M3 Design **May 2018 - Dec 2018**

- Prototyped medical device controls by developing Arduino hierarchical state machine, integrating 3 sensors, 4 motors, and OLED display, and collaborating on mechanical and industrial design specifications
- Designed RC charge/discharge circuit for patent-pending ball-pitching prototype by determining electrical load to size circuit components, programming Arduino IO logic, and building electronics enclosure

Launch Intern, SpaceX **Aug 2017 - Dec 2017**

- Developed 2 Excel models to calculate Crew Dragon ocean recovery loads, designed and analyzed 4 parts with Siemens NX and ANSYS FEA analysis, worked with 7 suppliers to fabricate components, drafted ocean recovery procedure, and executed 3 offshore operational and equipment tests
- Designed custom tool used in March 2019 Crew Dragon Demo-1 ocean recovery, presented preliminary design review, and coordinated critical design and timeline requirements with international manufacturer

Robotics Intern, Applied Materials **Oct 2016 - Aug 2017**

- Reduced cost of silicon wafer lift on test stands from $3,000 to under $500 by designing assembly in Solidworks, 3D-printing parts, assembling, and cycle-testing in 1-month schedule
- Characterized robot repeatability, thermal/mass deflection, and vibration specs by building 4 test stands, performing 4 experiments, and automating analyses with 1 Python and 3 MATLAB scripts

SELECT PROJECTS

Smart Cart, ME 377K Independent Research Project **Aug 2018 - Dec 2018**

- Developed control system architecture to perform obstacle avoidance using 3 I^2C-networked Arduino microcontrollers, 2 encoders, 1 gyroscope, and 5 ultrasonic proximity sensors
- Designed SolidWorks assembly and prototyped with 3D-printer, machine shop, and soldering equipment

Low-Cost Menstrual Pad Fabrication Devices, ME 266K Senior Design Capstone **Aug 2018 - Dec 2018**

- Led team to develop low-cost menstrual pad fabrication devices for Red Cross to deploy in crisis regions
- Managed unique expectations of project advisors, Red Cross leadership, deployment team, and course instructor by hosting weekly stakeholder-centric meetings to discuss progress, blockers, and requirements
- Owned thermal and electrical subsystem design, analysis, and prototyping while contributing to structural designs through concept generation, critical design feedback, and prototyping
- Prototype used to fabricate 500+ menstrual pads for under $0.12/unit in Beirut refugee camp during June 2019 deployment trials

TOOLS

- Design and Analysis: ANSYS, Creo, Siemens NX, SolidWorks
- Software: C++, Git, LabVIEW, Ladder Logic, MATLAB, Python
- Prototyping: 3D-printing, Arduino, Raspberry Pi, machine shop tools, surface mount soldering