CHRISTOPHER GOUL

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EDUCATION

Bachelor of Science, Mechanical Engineering **June 2019**
Massachusetts Institute of Technology Boston , MA

WORK EXPERIENCE

Senior Mechanical Design Engineer **August 2020 – Present**
Tesla Palo Alto, CA

- Led Megapack 2XL door design and analysis. Doors seal to IPx6 and are required to withstand high pressure deflagration events
- Developed new FEA workflow to enable rapid iteration on Megapack structure. Optimized size and location of structural members to improve performance under seismic loading, reduce part cost, and shorten manufacturing cycle times- saving Tesla $15 million/year
- Led ramp of Megapack 2 product, reviewed line processes and quality issues, optimized part design for cost and manufacturability
- Designed sheet metal parts, plastics, bus bars, and harnesses for V3 Supercharger Cabinet
- Designed tooled coolant manifolds for power electronics based on fluid simulations in GT Suite
- Developed strategy and design for passing supercharger EMC Class A requirements. Created retrofit solution with custom shielding, ferrites and capacitor boards to enable overseas deployments

Robotics Engineer **June 2019 – Apr 2020**
Contour Crafting Corporation El Segundo, CA

- Developed a novel concrete delivery system for construction 3D printing. System transported concrete from a dispensing station to a moving 3D printer head on a 9m wide gantry.
- Integrated mechanical design with electric and pneumatic actuators, sensing, and controls. Machined and fabricated critical modules to test system viability

Undergraduate Researcher **June 2018 – June 2019**
Conservation International with MIT Photovoltaics Lab Boston, MA

- Led a student team in designing and building autonomous solar quadcopters to monitor deforestation in the Andes
- Integrated sensors, charging electronics, GPS and LIDAR modules to enable autonomous performance over long-distance data gathering missions.

Engineering Intern **June 2017 – August 2017**
Meggitt Defense Systems Lake Forest, CA

- Designed electromechanical devices, such as a compact lifter for an airplane flap and an actuator for fin detachment mid-flight, from concept to manufacturing

TECHNICAL SKILLS

Design and Modelling Tools: CATIA, SOLIDWORKS, MATLAB, Hyperworks, GT Suite
Part Design: Sheet Metal Stamping, Roll Forming, Injection Molding, Thermoforming, Forging, Machining, Welded Assemblies, Powdercoating, Coolant Manifolds, Harnesses, Extruded Gaskets , GD&T, Tolerance Stackup Analysis
Programming: Python, C, C++
Languages: Spanish (Advanced), Chinese (Beginner)