Christopher Goul

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EDUCATION

Massachusetts Institute of Technology *GPA 4.5/5.0*
Bachelor of Science in Mechanical Engineering, June 2019

EXPERIENCE

Robotics Engineer **Contour Crafting Corporation**
June 2019- Present *El Segundo, CA*

Lead engineer developing a concrete delivery system for construction 3D printing. Integration of mechanical design with electrical systems, controls, and data management. Extensive ideation, risk analysis, design, fabrication, and iteration of critical modules to develop a novel system within a unique set of constraints. Work included FEA, PCB design, sensor integration, and Wi-Fi modules.

Researcher **Conservation International with MIT Photovoltaics Lab**
June 2018-June 2019 *Cambridge, MA*

Led a student team in designing and building autonomous solar quadcopters to monitor deforestation in the Andes. Optimized a system with conflicting constraints to maximize flight time and payload while minimizing charging time**.** Integrated sensors, charging electronics, GPS and LIDAR modules to enable autonomous performance over long-distance data gathering missions.

Engineering Intern, Aeromechanical Systems **Meggitt Defense Systems**
June – Aug. 2017 *Lake Forest, CA*

Designed electromechanical devices, such as a compact lifter for an airplane flap and an actuator for pin release, starting from concept and ending with sending drawings to fabrication**.** Design for manufacturing and GD&T**.** Parts were analyzed and with FEA and CFD in SolidWorks.

Researcher **Institute for Soldier Nanotechnologies**
Sept. – Nov. 2016 *Cambridge, MA*

Performed Taylor impact testing on polycarbonate projectiles with a gas gun. Analyzed high-speed camera footage to determine material yield stress at high strain rates

Research Intern **National Fuel Cell Research Center**
June-Aug. 2016 *Irvine, CA*

Developed software for data analysis of the High Temperature Fuel cell at UCI Medical Center. Used Python to develop a fast, clear GUI to display and store running data from the cell**.**

Researcher **MIT Space Propulsion Lab**
March-June 2016 *Cambridge, MA*

Built a high-voltage power supply for the testing of miniature ion thrusters. Selected and assembled power modules in a custom enclosure to meet voltage and current requirements.

SKILLS

*Mechanical***:** FEA, Mill, Lathe, 3D Printing, Laser Cutting
*Computer***:** C**,** Python, Matlab, HTML, ROS, Arduino, Raspberry Pi, Visual Studio
*CAD***:** PTC Creo/Pro-E, AutoDesk Inventor, Fusion 360, SolidWorks, Mastercam
Languages: Spanish (fluent), Mandarin (3 years High School)