Christopher Goul

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EDUCATION

Massachusetts Institute of Technology
Bachelor of Science in Mechanical Engineering, June 2019

EXPERIENCE

Robotics Engineer **Contour Crafting Corporation**
June 2019- Present
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.

Researcher **Conservation International with MIT Photovoltaics Lab**
June 2018-June 2019
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 various sensors, charging electronics, GPS and LIDAR modules to enable autonomous performance.

Engineering Intern, Aeromechanical Systems **Meggitt Defense Systems**
June – Aug. 2017
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**.** Each mechanism had to meet specific system requirements and constraints**.** Parts were analyzed and tested with FEA and CFD.

Researcher **Institute for Soldier Nanotechnologies**
Sept. – Nov. 2016
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
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
Built a high-voltage power supply for the testing of miniature ion thrusters. Selected and assembled modules in a custom enclosure to meet voltage and power requirements.

SKILLS

*Mechanical***:** FEA, Mill, Lathe, 3D Printing, Laser Cutting
*Computer***:** C**,** Python, Matlab, HTML, ROS, Arduino, Raspberry Pi, Linux**,** Visual Studio
*CAD***:** AutoDesk Inventor, Fusion 360, SolidWorks, Mastercam