Joseph Hatch

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Objective	I'm looking for a highly technical position to capitalize on my specialization in spacecraft	
	design, but I also have an interest in propulsion, trajectory design, EDL, payload	
	development, systems engineering, and pursuing a management position	
Education	Rensselaer Polytechnic Institute, Troy, NY	May 2017
	B.S. Aerospace Engineering	GPA 3.43/3.00
Engineering Experience	 NASA – Jet Propulsion Laboratory, Mech Engineering Co-op Mars 2020 - Entry, Descent, and Landing & Rover Chassis Pyro and Separations – Developed prototype design (NX CAD) of solution to single point of failure. Design and Analysis of Data for Bridle Cut Characterization testing with cutters and high-speed video. BUD (lowers Rover from Sky Crane) – Organized heritage hardware and documentation from Mars Science Lab to streamline build-to-print capabilities of project. 	8-month co-op, Jan – Aug '16
	 <u>Detachable Belly Panel</u> – Organized and conducted drop testing to simulate separation event. Designed proof-of-concept prototype for low outgassing gasket. Developed test procedure to verify validity of new design. <u>Descent Stage Prop Lines</u> – Acted as point of contact for hardware. Oversaw fabrication, manufacturing, and (Instronstrain, bending, torsion) testing. 	
	 Center for Flow Physics and Control, Undergrad Research Projects assisted: Characterization of Transitional Boundary Layer on a Flat Plate (Northrop-Grumman) – Dr. Burak Tuna Interactions of a Dynamic Vortex Generator with a Crossflow (Boeing) – Erica Cruz, Ph.D. student Manufacturing of Synthetic Jet Actuators (Boeing) – Kevin Housley, Ph.D. student Laboratory skills learned - Particle Image Velocimetry (PIV), Constant Temperature Anemometry (CTA) with a Hot Wire (proficient), general machine shop skills Assisted in the setup of several laboratory experiments, including in a large-scale, subsonic wind tunnel Developed and manufactured active flow control actuators NASA Student Launch, Payload Lead	Summer '15 – Present
	 Lead design, development, and integration of payload system for annual nation-wide NASA competition Payload is designed to induce precision roll/de-roll maneuvers as well as act as active drag control 	Aug '16 – Present
Leadership Experience	Treasurer, Rensselaer Rocket Society (RRS) • In charge of budgeting, corporate sponsorships, and allocation of funds for the club. Managing \$3,500 a year Production Manager, Collegiate Entrepreneurs	Spring '14 – Fall '15
	 Acted as liaison between branch manager and clients, diffusing tensions and improving relations Produced \$60,000 in work over the summer 	Summer '14