

# Dallin Cordon

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## Education

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<b>Brigham Young University, Ira A. Fulton College of Engineering</b>	<i>Graduation</i>
MS, Mechanical Engineering — Robotics; <i>GPA</i> : 3.85	<b>Provo, UT</b> <b>Apr 2025</b>
<ul style="list-style-type: none"><li>• <i>Specialized Courses</i>: Autonomous Aircraft (Flight Dynamics and Control), Robotic Vision, Robotic Localization and Mapping, Engineering Software Development, Optimization, Math of Signals and Systems, Neuromechanics, Multi-Agent Systems</li></ul>	
BS, Mechanical Engineering; <i>GPA</i> : 3.63	<b>Provo, UT</b> <b>Apr 2022</b>
<ul style="list-style-type: none"><li>• <i>Specialized Courses</i>: Controls, Robotics, Mechatronics, Advanced Dynamics, System Modeling, Measurements, Fluid Dynamics, Mechanical System Design, Material Science, Manufacturing Processes, Electrical Systems, ODEs, Technical Writing, Statistics</li></ul>	

## Experience

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<b>BYU Robotics and Dynamics Lab</b>	<b>Provo, UT / Nancy, FR</b> <b>Aug 2022 — Present</b>
<i>Graduate Researcher</i>	
<ul style="list-style-type: none"><li>• Conducted novel research into dynamic human-robot interaction, emphasizing collaborative manipulation between individuals and soft, pneumatic continuum robots.</li><li>• Leveraged natural compliance of soft robots to streamline control architectures and enhance safety in collaborative environments.</li><li>• Supervised and mentored undergraduate students through robotic hardware and software development dedicated to optimizing manipulation and vehicular systems, subsystems (pneumatics, power, data, control), and interfaces for human-robot interaction.</li><li>• Assisted development and testing of embedded soft robot pressure control system using custom RS-485 communication schemes.</li><li>• Received <i>Judges Award</i> at university-wide research event and <i>Best Demo</i> award at international soft robotics conference.</li></ul>	
<b>BYU Rocketry Association</b>	<b>Provo, UT</b> <b>Sep 2018 — Apr 2022</b>
<i>President</i>	
<ul style="list-style-type: none"><li>• Developed operational procedures for organization of over 350 students with 4 experience tiers.</li><li>• Supported coordination and execution of all rocketry activities before, during, and after scheduled launches including testing.</li><li>• Interfaced between administration, launch site personnel, and internal team to establish functional communication channels, ensure compliance, document standard practices, and maintain positive relationships.</li></ul>	
<i>High-Power Team Lead</i>	Jul 2020 — Jul 2021
<ul style="list-style-type: none"><li>• Directed rocket mission life cycle from pre-launch testing to flight-readiness and operations.</li><li>• Led interdisciplinary team of nine in development (requirements, design, procurement, build) of infrastructure for rocket operation, performance, recovery, and payload integration.</li><li>• Ensured proper integration and functionality of subsystem interfaces (sensor suite, energetics, control surfaces, recovery, etc.).</li></ul>	
<b>BYU Autonomous Mars Rover</b>	<b>Provo, UT</b> <b>Aug 2021 — July 2022</b>
<i>Mechanical Team</i>	
<ul style="list-style-type: none"><li>• Redesigned rocker-bogie 6-wheel suspension system to fold and lock into space-saving storage and transportation configurations.</li><li>• Collaborated with interdisciplinary teams to design and implement a pivotal elevator component crucial for—and interchangeable between—science missions and manipulation tasks.</li><li>• Carried out comprehensive subsystem technical design documentation to facilitate seamless transferability.</li></ul>	
<b>BYU College of Engineering</b>	<b>Provo, UT</b> <b>Jan 2021 — Apr 2023</b>
<i>Controls TA, Robotics TA</i>	
<ul style="list-style-type: none"><li>• Instructed and supported students in application of various control methodologies, on simulation and hardware VTOL systems.</li><li>• Conducted weekly lectures on control theory, communicating complex concepts to students unfamiliar with the domain.</li></ul>	
<i>Robotics TA</i>	Aug 2022 — Dec 2022
<ul style="list-style-type: none"><li>• Educated students on essential concepts related to robotic manipulators, including kinematics, dynamics, and control.</li></ul>	
<b>General Dynamics Ordnance and Tactical Systems</b>	<b>Healdsburg, CA</b> <b>Jun 2020 — Aug 2020</b>
<i>Mechanical Engineering Intern</i>	
<ul style="list-style-type: none"><li>• Performed static structural and modal analysis on M982 artillery shell control actuation systems using ANSYS to assess structural integrity when exposed to firing setback forces in excess of 15,000 G's.</li><li>• Researched non-explosive deployment alternatives for canard extension in navigation shells exploring solenoids, lead screws, and other actuation mechanisms to optimize material acquisition requirements.</li><li>• Worked directly with technical team assisting with vibration test fixturing and component assembly troubleshooting.</li></ul>	

## Technical Skills

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Python	ROS	MATLAB	Git / Bitbucket	SolidWorks	Composites
C++ / C / C#	OpenCV	Linux	LaTeX / Documentation	Machining	Portuguese (Advanced)