

Ryan Grotke

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EDUCATION

B.S. Mechanical Engineering

Expected Apr 2028

University of Colorado Boulder, Boulder, CO

Minor in Engineering Management, Lockheed Martin Engineering Management Program

Relevant Coursework: Dynamics (completed); Thermodynamics I, Fluid Mechanics, and Circuits and Electronics (in progress)

TECHNICAL SKILLS

Design and Fabrication: SolidWorks, reverse engineering, 3D printing, acrylic fabrication

Robotics and Controls: Arduino, Pixy2 vision camera, ultrasonic sensors, motor controllers

Programming and Automation: Python, OCR, Azure, databases

ENGINEERING PROJECTS

Autonomous Cafe Delivery Robot | University of Colorado Boulder

Spring 2026

Engineering Projects course; Best in Automation, CU Robotics Club

- Led technical integration for a five-person autonomous delivery robot, combining an Arduino, Pixy2 vision camera, motor controllers, ultrasonic sensors, and omnidirectional wheels.
- Designed and fabricated the camera enclosure and mount, 3D-printed chassis corners, acrylic walls, and an adjustable cupholder; assembled and refined the system through testing.
- Programmed target search, alignment, approach, and obstacle avoidance using dual-color visual targets and camera centering to reduce environmental color confusion.

CLEW Step-In Snowboard Binding CAD Model | Independent Project

2026

- Measured a physical step-in binding and built a four-assembly SolidWorks model with articulated handle and ratchet components.

EXPERIENCE

AI Solutions Engineer Intern | Brookstone Partners

May 2026 - Present

- Developed a Python and OCR tool to reconcile purchase-order paperwork, invoices, and accounting records and flag discrepancies for review.
- Built a workflow-capture tool that turns narrated demonstrations and recorded input into draft procedures and automation specifications.
- Owned requirements, implementation, and user testing; integrated the tools with internal systems and Azure services.

ADDITIONAL EXPERIENCE

Food Runner, Busser, and Barback | Stoney Point Grill

Jan 2024 - Present

Warehouse Assistant | Instone

Apr 2021 - Aug 2022