Ty Snyder

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EDUCATION

University of California, Berkeley May 2028
Major - Data Science, Dual Minor - Mech eng and EECS *GPA: 3.54*

Relevant Coursework:
Foundations of Signals, Circuits & Devices, Solid Mechanics, Dynamic Systems & Feedback Controls

WORK EXPERIENCE

Intech Mechanical Roseville, CA
BIM Intern and Addon Programmer January 2023 – August 2025

- Developed a solo C# 25k line addon that optimized workflow, removing ~60% of repetitive Revit tasks.
- Produced detailed drawings for the field and shop teams for manufacturing and installation.
- Improved broken addons to save costs, make them more user-friendly, and more performant.

LEADERSHIP & INVOLVEMENT

Combat Robotics at Berkeley Berkeley, CA
Project Manager June 2025 – Present

- Manage a $15k budget and timelines to keep 80+ members on track for 3+ competitions.
- Assist returning members in idea generation, team forming, and the manufacturing of robots.
- Optimized drive on a 30lb combat robot to cancel gyroscopic effect from the weapon while still having 11m/s max speed.
- Built a timing belt calculator to ensure belts fit well and prevent slipping.

Open Cal Research Lab Berkeley, CA
Undergrad Researcher August 2025 – Present

- Lead CAD organization to keep the document running smoothly and user-friendly for public release.
- Collaborated on designing an open-source Computation Axial Lithography (CAL) 3d printer using the knowledge gained through research efforts.
- Built optimized parameterization to be able to accommodate different projectors without full reCAD.

PROJECTS

Quadruped Robot V1 and V2 2023 – Present
Personal Project

- Derived from scratch inverse kinematics formula to send the feet to the correct end effector.
- Manufactured custom 3d printed the chassis to have no cantilever joints and not bend under its own weight.
- Programmed a Raspberry pi to read a controller input via bluetooth to control the quadruped.

GPS Navigated Car 2022 – 2023
Group Project

- Retrofitted an RC car with a Matek controller running ArduPilot and GPS to enable waypoint navigation.
- Choose electronics to give ± 0.5m precision at 7 m/s for under 100$.
- Programmed a manual override failsafe with FPV feed to ensure recovery during signal loss.

SKILLS

Software: Autodesk Fusion, Onshape, Autodesk Workflow Automation, Revit, C#, Python, SQL, Java Script
Communication: Student Coaching, Team Leadership, Technical Documentation, Public Speaking
Technical: Mechanical Design, HVAC & Plumbing Systems, Sensors, Robotics, Automation