

Charles Bradley

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EDUCATION

California Polytechnic State University

Bachelor of Science in Mechanical Engineering

San Luis Obispo, CA

Expected May 2028 — Junior standing by credits

- **Relevant Coursework:** Engineering Statics, Engineering Dynamics, Electric Circuit Theory, Programming for Engineering Students, Linear Analysis (Honors), Manufacturing Processes: Material Removal
- **Activities & Societies:** Member, Sigma Phi Delta (Professional Engineering Fraternity)
- **GPA (Major):** 3.4

PROJECTS

TARS | *Sigma Phi Delta*

Jan 2026 – Present

- Developing a proof-of-concept robot inspired by TARS, capable of autonomous locomotion
- Implementing voice commands to control movement using predefined servo positions
- Designing a scalable mechatronics platform for future expansion into vision-based automation, asynchronous control, and artificial intelligence

RC Cars | *Sigma Phi Delta*

Jan 2026 – Present

- Collaborating with alumni to design and build a fully 3D-printed RC car under a \$250 budget, competing in a multi-team race
- Working on mechanical design and electrical integration to ensure seamless integration
- Designing and modeling the steering rack assembly in SolidWorks

Vacuum Chamber | *Milwaukee Tool*

Jan 2023 – April 2023

- Collaborated on a three-person team to design and prototype a vacuum chamber capable of simulating altitudes up to 29,500 ft, enabling in-house high-altitude testing
- Conducted analytical calculations for vacuum pump sizing, pressure differentials, material strength, and factors of safety, improving the reliability and repeatability of testing
- Created proof-of-concept and detailed CAD models, including chamber, base structure, and component interfaces to guide next-phase development and documentation

Waste Reduction | *Asea Brown Boveri*

Sept. 2022 – Dec 2022

- Collaborated on a three-person team to research waste-reduction strategies for packaging and labeling materials
- Proposed solutions projected to save \$20,000 annually while reducing carbon footprint and enabling a circular reuse of styrofoam packaging waste
- Presented findings to ABB's environmental team using Microsoft Suite

EXPERIENCE

Expeditor

May 2021 – Sept 2024

North Star American Bistro

Brookfield, WI

- Coordinated between front and back-of-house to ensure accurate and timely service
- Strengthened communication, leadership, and time management skills in a fast-paced setting

CERTIFICATIONS

Certified SolidWorks Associate (CSWA) | *Dassault Systèmes*

Autodesk Inventor Certified User | *Certipoint*

Lean Six Sigma | *LinkedIn*

TECHNICAL SKILLS

Software: SolidWorks, Autodesk Inventor, MATLAB, Siemens NX, Microsoft Office Suite (Excel, Word, & PowerPoint)

Hardware: Hand Drafting, Soldering, Machining (Lathe & Mill)