

# Charles Bradley

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## EDUCATION

### California Polytechnic State University

*Bachelor of Science in Mechanical Engineering*

San Luis Obispo, CA

*Expected May 2028*

- **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:** 3.2 (Cumulative) / 3.4 (Major)

## 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

- Collaborated with alumni to design and build a fully 3D-printed RC car under a \$250 budget, competing in a multi-team race
- Worked on mechanical design and electrical integration to ensure seamless integration
- Designed and modeled 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)