J. Echeverria

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www.jecheverria5252.com/2025-resume-x4jK92vD/Controls.pdf

Summary

I'm an early-career engineer with a strong foundation in classical control systems and applied experience across automation, vehicle dynamics, and hardware environments. My background includes PID tuning, system stability, and translating theoretical models into real-world control strategies. I've worked in diverse technical settings—from warehouses and electronic labs to agricultural equipment manufacturers—gaining exposure to industrial workflows and control-related challenges. I'm drawn to fast-moving operations where control logic, hardware behavior, and process flow intersect. Currently seeking roles in automation, controls, and system reliability engineering.

Technical Skills

Controls	PID tuning, ladder logic Allen-Bradley, classical control theory and feedback
Software	Simulink, RSLogix, MATLAB, Python, AutoCAD, SolidWorks, C/C++
Diagnostics	Oscilloscopes, multimeters, power supplies, electronics troubleshooting, calibration, emissions testing, I/O validation, Digital aquisition
Fabrication	Soldering, machining, prototyping, automotive diagnostics, hands-on electrical & mechanical

Experience

11/2024 – 03/2025 **Calibration Technician**, *Liberty Test Equipment*, Roseville, CA
- Executed high-precision calibration of electronics test lab equipment in an A2LA-accredited lab.

05/2023 – 06/2024 **Certification Test Engineer**, *Trackonomy Systems*, San Jose, CA
- Led hardware compliance testing for CE, FCC Part 15, and UL standards, increasing certification approvals by 30%.
- Conducted root cause analysis to improve product reliability and regulatory compliance.
- Collaborated with cross-functional teams to secure market access for new products.

03/2019 – 11/2022 **Maintenance Technician**, *Peregrine School*, Davis, CA
- Managed facilities repair and maintenance, including cost estimation and project planning.
- Coordinated with stakeholders to complete improvement projects on time and within budget.

05/2013 – 06/2016 **Certified Technician**, *Community Housing Opportunities Corp.*, Vacaville, CA
- Performed weatherization for a non-profit, ensuring home efficiency and natural gas appliance safety.
- Provided excellent customer service and community support.

Education

2016 – 2024 **California State University**, *Sacramento, CA*
- **Master of Science in Electrical and Electronic Engineering**
- **Bachelor of Science in Mechanical Engineering**

Projects

Graduate Thesis	Developed Sequence-to-Sequence **neural network** models to predict control outputs for closed-loop temperature regulation systems, improving model accuracy for temperature stability.
Racing Projects	Machined and tested components for the Sac State formula SAE racing team. Off-campus, participation in the 24 Hours of Lemons race, contributed to mechanical repairs and **vehicle optimization** for endurance performance.
Various Controls Projects	Simulated **inverted pendulum** stabilization for self-balancing scooter in Simulink. Modeled evasive vehicle maneuvers using system equations in MATLAB. Conducted vehicle dynamics and model predictive control simulations. Developed a PLC-based Simon Says game in RSLogix.