

Elton Santini

Hardware Prototype Engineering | Embedded Systems | Robotics and Autonomous Vehicle Research and Development

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PROFESSIONAL SUMMARY

Hardware prototype engineering professional with 7+ years of hands-on experience building, integrating, and troubleshooting electromechanical systems in robotics, autonomous vehicles, and fast-paced research and development environments. Delivers prototypes, embedded systems, harnesses, test fixtures, and validation hardware that accelerate engineering development and reduce downtime.

EXPERIENCE

Prototype / Hardware Engineering Technician | DoorDash Labs | San Francisco, CA

March 2026 - April 2026 | Contract Work

- Designed and released 30+ electrical harnesses and prototype cable assemblies, removing manufacturing bottlenecks and accelerating prototype build throughput.
- Primary DRI for Raspberry Pi integration, ESD compliance, and electrical harness systems across prototype robotic platforms.
- Maintained master harness BOMs, part libraries, sourcing, repair, rework, and technician handoff documentation.

Fleet Service Maintenance Technician | Wayve | Sunnyvale, CA

November 2024 - March 2026

- Released full embedded systems design for Wayve and developed complex electrical harness systems using Rapid Harness for multiple vehicle configurations.
- Built prototype test benches for subsystem simulation and validation; troubleshot CAN/LIN, ECUs, sensors, and power systems.
- Led setup and launch of a new research and development service facility, including tooling, lab organization, workflow implementation, and SOPs.

Research and Development Engineering Technician - Propulsion and Central Test | Zoox | Foster City, CA

September 2023 - September 2024

- Executed electrical and mechanical testing for propulsion and HV systems on robotic platforms.
- Designed electrical harnesses, diagnosed prototype vehicle issues, and collaborated on fixtures and validation tools to reduce test time.

Research and Development Prototype Manufacturing Technician | Nuro | Santa Clara, CA

January 2023 - May 2023

- Assembled, installed, tested, integrated, and troubleshot sensors, compute systems, and electromechanical hardware for robotic prototypes.

Research and Development AV Technician | Cruise | San Francisco, CA

July 2022 - January 2023

- Diagnosed and repaired electrical, mechanical, and integration issues on autonomous vehicles; performed retrofits and documented process improvements.

SELECTED HARDWARE PROJECTS

- Portable CAN bus sniffer and signal generator for bench diagnostics and software validation.
- Vehicle interface control harness architecture for prototype validation.
- Custom test jigs, HV charger benches, CAN fault injection box, harness validation tools, and lidar EOL testing booth.

KEY SKILLS

Hardware prototyping | Embedded systems design | Wiring harness design | Rapid Harness | CAN / LIN diagnostics | Root cause analysis | Test fixtures | Validation benches | Robotics integration | Sensors and compute | Soldering / crimping | IPC standards | ESD lab operations | BOM management | Procurement | 3D printing / fabrication

CERTIFICATIONS AND EDUCATION

IPC 610 / 620 Certified | High Voltage Safety Certified | ASE EPA 609 Certified | Forklift Certified

Industrial Design Coursework | Berkeley City College | High School Diploma