



Natalia Cortez

Vehicle Test and Development Engineer I

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SUMMARY

Mechanical Engineer committed to improving the performance of vehicles. Extensive experience in testing noise and vibration metrics for prototypes. Skilled at developing plans, analyzing data, and collaborating with cross-functional teams. Experienced in conducting detailed evaluations that support innovative automotive advancements. Passionate about using analytical insights to optimize vehicle dynamics, ensuring high-quality outcomes while working strategically to achieve goals aligned with departmental objectives.

EDUCATION

Bachelor's Degree in Mechanical Engineering

University of California, Los Angeles 🎓 GPA: 3.8 📅 2025 📍 Los Angeles, CA

Coursework: *Engineering Dynamics, Vehicle Noise Analysis, Mechanics of Materials, Data Acquisition Techniques*

TECHNICAL SKILLS

- **Data Analysis Tools:** MATLAB, LMS Test.Lab, Microsoft Excel
- **Testing Equipment:** Data Acquisition Systems, Sensors, Accelerometers
- **Technical Documentation:** Reports, Presentations, Technical Manuals
- **Communication Platforms:** Email, Microsoft Teams, Presentation Software
- **Project Management Tools:** Trello, Asana, Google Workspace
- **Benchmarking Techniques:** Performance Metrics, Ride and Handling Evaluation, Subjective Assessments
- **Statistics Software:** SPSS, JMP, R
- **Vehicle Test Procedures:** Noise Testing, Vibration Analysis, Corner Weighting
- **Quality Assurance Methods:** Data Validation, Error Analysis, Reporting Standards
- **Presentation Tools:** PowerPoint, Poster Design Software, Graphing Applications

EXPERIENCE

Research Assistant

University Research Lab 📅 January 2025 - August 2026 📍 Los Angeles, CA

Supported research efforts focusing on noise and vibration analysis for prototype vehicles. Led test plan development and coordinated rigorous experimental investigations with a multidisciplinary team. Focused on delivering quality data to improve vehicle performance interpretations and formulations.

- Conducted experimental evaluations to assess vehicle dynamics, specifically targeting noise and vibration issues.
- Analyzed collected data using MATLAB and LMS Test.Lab, deriving actionable insights to inform design adjustments.
- Managed logistics for ride-and-drive events, facilitating hands-on assessments of vehicle prototypes among peers.
- Served as a liaison between faculty and student teams, benchmarking competitor models against current projects.
- Presented impactful findings at university symposiums, reinforcing communication skills and technical expertise.
- Collaborated on documentation efforts for internal reports highlighting research outputs and methodologies.

Capstone Project Developer

University Project 📅 September 2024 - December 2024 📍 Los Angeles, CA

STRENGTHS

- 💡 **Problem Solver**
Resolved complex technical challenges through detailed analysis and creative thinking during project phases.
- 👥 **Collaboration Enthusiast**
Fostered strong teamwork by actively engaging with diverse groups, promoting shared objectives during projects.
- 💬 **Effective Communicator**
Deliver clear presentations and technical reports, making dense information accessible to varied audiences.
- 📊 **Analytical Thinker**
Utilized advanced tools like MATLAB to derive analytical insights that contributed to improved vehicle designs.
- 📋 **Project Manager**
Successfully coordinated multiple projects, aligning team efforts to drive toward common goals within timelines.

SKILLS

Vehicle Dynamics

Noise and Vibration Analysis

MATLAB LMS Test.Lab

Data Acquisition Systems

Technical Documentation

Project Management

Microsoft Office Suite

Ride and Handling Assessment

Benchmarking Performance

Root Cause Analysis Reporting

Stakeholder Engagement

Sound Quality Analysis

Modal Analysis

Experimental Testing Techniques

LANGUAGES

English Native

Spanish Proficient

MY CAREER



● Research Assistant at
University Research Lab (1.6
Years)

● Capstone Project Developer
at University Project (3 Months)

Executed a capstone project centered around analyzing vehicle tire configurations' effects on performance. Focused on the practical application of vehicle dynamics principles to deliver insightful results.

- Designed a robust methodology to examine ride and handling performance variances due to different tire setups.
- Conducted literature reviews that laid a strong theoretical foundation for experimental work.
- Employed data acquisition systems to collect performance metrics, enhancing overall understanding of limitations.
- Developed strategic recommendations based on root cause analyses of observed performance challenges.
- Summarized project insights into comprehensive reports demonstrating clear technical writing proficiency.
- Communicated project outcomes effectively to faculty and industry representatives.

LEADERSHIP & AWARDS

- Dean's List, University of California, Los Angeles, 2024
- Recipient of the Mechanical Engineering Scholarship, 2023

CERTIFICATIONS

- Certified Engineering Intern 📅 2025
- AutoCAD Certification 📅 2024

PROFESSIONAL AFFILIATIONS

- Member, Society of Automotive Engineers, 2023 – Present
- Volunteer, Engineering Outreach Program, 2022 – Present

ADDITIONAL INFORMATION

Work Status : Authorized to work in United States. No sponsorship required.

REFERENCES

AVAILABLE ON REQUEST