KEERTHI SEPURI

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PROFESSIONAL SUMMARY

Mechanical Design Engineer (5+ yrs, Nikola & Tesla) focused on chassis, suspension & structures. Uses first-principles, CATIA, and ANSYS to cut weight, boost durability, and speed launches in high-pace settings.

EXPERIENCE

Nikola Motors   **Phoenix, AZ**
Mechanical Design Engineer, Chassis Team   *Aug 2022 – Present*

- Designed/Optimized 3 Suspension Systems (45+ structural components); - 12% mass via CAD (CATIA) and FEA
- Root-caused production bottlenecks; −20 % scrap, +15 % FCEV & +10 % BEV production throughput
- Spearheaded next-gen suspension; ran DFMEA/PFMEA
- Managed suppliers; issued GD&T/BOM/ESOW for on-time builds
- Led validation – durability, PPAP, bench & prototype builds
- Built bolt/kinematics tools; coached juniors on GD&T & stack-ups

Tesla   **Palo Alto, CA**
Mechanical Design Engineer, Chassis Team   *Sep 2021 – Jul 2022*

- Owned end-to-end Cybertruck brake lines/hoses & electrical harnesses; −40 % parts, −30 % assembly
- Invented clips + fluid-fill; +30 % assembly efficiency
- Balanced architecture/service/manufacturing/supplier/reliability tradeoffs via DFMEA/PFMEA
- Designed & validated Model 3 brake parts (CAE + bench/vehicle tests)
- Mentored Junior Tesla Shanghai engineers; partnered with global suppliers and teams

Pensa Labs   **New York, NY**
R&D Mechanical Engineer   *Mar 2020 – Sep 2021*

- Led design and validation next-gen electro-mechanical CNC wire-bender; +40 % precision
- Deployed lean manufacturing principles, - 25% production cycle time

Early Experience
Mechanical Design Engineer   *Mar 2017 – Dec 2019*

- **Toyota** (Intern) — Conveyor system redesign; ₹4.8 M savings and 2x throughput
- **Pensa Labs** (Intern) — Machine resolution +80 % using MATLAB, CAD, testing and a LOT of wire
- **Automotive Component Design** — Stamped BIW/closure parts in CATIA; crash & snow-load optimized
- **BAJA SAE** (Chassis Lead) — Built tube chassis + suspension; higher stiffness-to-mass

EDUCATION

New York University   **New York, NY**
Master of Science in Mechanical Engineering   Graduation Date: Jan 2020

Jawaharlal Nehru Technological University   **Hyderabad, India**
Bachelor of Science in Mechanical Engineering   Graduation Date: May 2018

SKILLS

Design Tools: CATIA V6/3DX (10k hrs.), SolidWorks, NX, Fusion 360, PLM, BOM ownership & documentation

Analysis & Project Management: FEA (Static, Modal, Fatigue), ANSYS, 3DCS Tolerance Analysis Software, JIRA, Confluence, Root-Cause Analysis (8D, Fishbone, 5Why Analysis), CAN Bus Data Logging

Core Competencies: Design for High Volume Fabrication (CNC Machining, Sheet Metal, Injection Molding, Stamping, Casting), DFM/DFA/DFS, DFMEA/PFMEA, GD&T and Tolerance Stack-up Analysis

Soft Skills: Bias to Action, Detail-Oriented, accelerated execution, Self-starter, thrives in fast-paced, high-ownership environments, cross-functional & supplier collaboration, RFQ/PPAP, Technical & Non-Technical Communication