

# KEERTHI SEPURI

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## PROFESSIONAL SUMMARY

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Mechanical Design Engineer (5+ yrs) across Tesla, Nikola, Lucid Motors. Focus: chassis systems, dynamic routing, production issue resolution. Strong in constraint-driven design, validation, and manufacturing integration.

## EXPERIENCE

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### Lucid

Phoenix, AZ

*Plant Mechanical Design Engineer, Chassis Team*

May 2025–Present

- Fixed #1 warranty issue on Lucid Air AWD via friction shim; validated with torque–tension (~85 Nm), track tests (J-turn, slalom, bumps), durability
- Reduced brake pedal defects (~80% builds, Lucid Gravity) via 3D-printed tool + inspection control point
- Avoided line stop (all Air builds) via same-day rotor interchange validation (~30 min)
- Resolved brake fluid contamination risk via lab testing (specs + pass/fail) and sealed-drum controls
- Drove chassis issue triage (15–20 ICAs, 4–5 PCAs), impacting production line uptime and field warranty claims

### Nikola

Phoenix, AZ

*Mechanical Design Engineer, Chassis Team*

Aug 2022–April 2025

- Built kinematic models + envelopes enabling ~150 engineers (10 teams) to package ~350 components across 6+ systems
- Fixed line-stop issue (100% trucks) from ride height stack-up; resolved within 48 hours
- Redesigned parts under material shortage; released via deviation (non-PPAP) to sustain production
- Removed packaging clash via bracket redesign; aligned Nikola + Iveco + supplier
- Standardized routing via simulation-driven fixtures used on every truck on the production line

### Tesla

Palo Alto, CA

*Mechanical Design Engineer, Chassis Team*

Sep 2021–Jul 2022

- Simplified Tesla Cybertruck brake system (9→6 lines, 13→10 joints) while preserving system redundancy
- Led clip design under no-machining constraint, replacing brake line/hose mounts with as-cast features, increasing gigacasting throughput
- Reduced cost via bend optimization + supplier cost modeling
- Owned dynamic routing (hoses + wheel-end harness) under extreme motion using IPS
- Fixed simulation mismatch on Tesla Model 3 via material model correction

### Pensa Labs

New York, NY

*R&D Mechanical Engineer*

Mar 2020–Sep 2021

- Enabled continuous curvature wire bending under hardware constraints
- Solved undefined problem via iterative testing; standardized into repeatable workflow

### Early Experience

*Mechanical Design Engineer*

Mar 2017–Dec 2019

- **Toyota** (Intern) — Conveyor system redesign; ₹4.8 M savings and 2x throughput
- **Pensa Labs** (Intern) — Improved machine capability (~80%) via CAD, MATLAB, and iterative testing
- **BAJA SAE** (Chassis Lead) — Built tube chassis + suspension; higher stiffness-to-mass

### Leadership & Impact

- Mentored 20+ engineers; led kinematics/IPS training, increasing adoption and reducing packaging conflicts

## EDUCATION

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**M.S. Mechanical Engineering** – New York University (New York, NY | Jan 2020)

**B.S. Mechanical Engineering** – JNTU Hyderabad (Hyderabad, India | May 2018)

**SKILLS:** CATIA V6/3DX, NX, SolidWorks • ANSYS, IPS • GD&T, tolerance stack-ups • DFM/DFA, DFMEA • PLM, JIRA