KAUSHINDRA S

CAE ANALYST

EXECUTIVE PROFILE

Highly motivated and accomplished CAE professional with 3+ years of experience in R&D at Tata Autocomp Technical Center. Specialized in Multibody Dynamics (MBD), NVH (Noise, Vibration, and Harshness), Durability analysis. Proficient in design validation and optimization using FEA methods, with extensive hands-on experience delivering innovative and test-correlated solutions for complex automotive systems.

EXPERIENCE

TATA AUTOCOMP SYSTEM LIMITED -TECHNICAL CENTER

Deputy Manager – CAE | R&D | July 2022 – Present

- Developed and simulated a full tracked vehicle model in MSC ADAMS ATV Toolkit; tuned suspension and performed dynamic analysis across trench, step, uphill, and downhill terrains to optimize ride height, stability, and suspension loads.
- Simulated defence wheeled vehicle stability under firing in ADAMS View; evaluated pitching and yaw response with rigid and flexible body models.
- Performed PSD durability and modal analysis in OptiStruct to assess structural performance of defence vehicles under random road loads.
- Simulated mechanism systems in MSC ADAMS, including ramp door (gas spring forces), FRP hood, and tipper trailer, to evaluate kinematics and reaction forces.
- Calculated gearbox bearing forces using MSC ADAMS Gear AT, correlating results with supplier-provided data for validation.
- Performed NVH analysis of an EV gearbox using Simcenter 3D; predicted noise levels and correlated with ARAI test data for validation.
- Conducted FRF and ERP analysis of an EV charger to predict stress, displacement, and noise levels under excitation.
- Performed FRF analysis of stone crusher components to study stress and displacement under excitation loads.
- Simulated induction brazing of copper–aluminum busbars using Altair Flux; validated simulation results with experimental data.
- Evaluated formability of battery cooling plates using InspireForm; optimized design to reduce thinning and wrinkling during manufacturing.

EDUCATION

NATIONAL INSTITUTE OF TECHNOLOGY KURUKSHETRA (2020-2022)

M.Tech in Machine Design (7.9118 CGPA)

M.Tech Thesis: Optimization of worm and worm gear drive by using metaheuristic algorithms

SKYLINE INSTITUE OF ENGINEERING AND TECHNOLOGY GR. NOIDA (2014-2018)

B.Tech in Mechanical Engineering (75.92%)

Project: Design and fabricated single seater electric car

JANTA INTER COLLEGE (2011-2014)

Intermediate (2013-2014)- 73.4% High School (2011-2012)- 79.33%

AREA OF INTEREST

- Multi-Body Dynamics (MBD)
- Noise, Vibration,& Harshness (NVH)
- Durability Analysis
- Electric Vehicle R&D
- Product Design & Optimization

PROFESSIONAL SKILLS

- Problem-Solving
- Technical Ability
- Self-Motivated
- Team Player
- Good Communicator
- Quick Learner

SOFTWARE & SOLVERS

- HYPERWORKS TOOLS
- MSC ADAMS VIEW
- MSC ADAMS CAR
- SIMCENTER 3D
- ALTAIR FLUX
- OPTISTRUCT
- NASTRAN
- ABAQUS

LANGUAGES KNOWN

- ENGLISH
- HINDI