

ABHIJITH SHETTY

Qualification: B.E (Mechanical)

Current Location: Bangalore

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PROFESSIONAL SYNOPSIS

- Currently working as Specialist in SATVEN Engineering Service Private Limited.
- Total experience of 10+ which includes **7 years in CAE for Automotive Industry** including model Building, Full Vehicle integration and Base Line Load cases for NVH simulations.
- Worked on Acoustic sensitivity and tactile analysis in Trim Body.
- Software Skills: ANSA, Nastran, Metapost, Hyper view, Hypermesh, CATIA.
- Basic knowledge of Japanese Language JLPT N5.

SPECIFIC AREAS OF EXPERTISE

- Worked for automotive clients like Suzuki Japan, Honda Japan, Ford India and Volvo India.
- Good experience in team and customer management for technical issues.
- Experienced in executing multiple projects and project planning.
- Have good experience in the area of small passenger vehicles, Sports Utility vehicles & commercial vehicles (Trucks CAB unit).
- Model building and Full vehicle integration for NVH simulations.
- Performing baseline NVH analysis to calculate different Noise Transfer Functions (NTFs), Vibration Transfer Functions (VTFs), and Eigen values analysis.
- Point Mobility and Cross point mobility analysis on Full vehicle.
- Have experience in CATIA 3D modelling, 2D modelling and assembly creation.

WORK EXPERIENCE

Sathyam Venture Engineering Services Pvt.Ltd: August 2020 – till date.

Client: Ford India Motor Private Limited.

- First output file preparation for NVH simulation.
- Trim Body and Sub assembly validation as per quality check list.
- Preparing modal chart for Trim body and all Subassemblies.
- FRF analysis for dynamic stiffness calculations.
- Preparation of NVH console ANSA file which includes Modal and FRF results with cavity coupling with Trim Body.

Semcon India Private Limited: July 2019 – July 2020

Client: Volvo India

- Trim Body Truck CAB unit NVH model build and baseline Simulations.
- Steering, Mirror NVH modal frequency iterations and modifications.
- Vehicle Front Concept model analysis and Mode optimization.
- Floor mat model Build up for Actran solver setup.

Wipro technologies: August 2011 – July 2019

Client: Honda Japan, Suzuki Japan.

Full vehicle integration of passenger vehicle for NVH Simulations.

- Worked on Subassemblies like Seats, Suspension, Sub frame, Steering Column and Steering gear box, Sunroof, IP panel, Closures and BIP.
- Young Modulus and Frequency Tuning of specific cast components and dynamic dampers.
- Calculation of Static Stiffness value of Rubber bushing rates using SOL 101.
- Taking care of modeling team and integration of all BIW parts.
- Acoustic Modeling of coupling surface parts & Seat cushion modeling.
- Full Vehicle Integration of BIW and Subassembly.

New design vehicle development Modal and Frequency Response Analysis: VTF & NTF

- Eigen value and FRF analysis of complete trimmed body using Nastran to establish the natural frequency and Identifying the Global and major mode shapes.
- Base line simulations and First output calculations for Vehicle Trim body.
- Worked on NTF and VTF issues and Frequency tuning for Trim body level.
- Worked on NTF and VTF Root cause Analysis and counter measure proposal in Trim Body.
- Acoustic sensitivity and tactile analysis of new design vehicle development.

Academic Profile

B.E (Mechanical Engineering)

CGPA: 8.97

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Significant Projects

Client	Ford India Motor Private Limited.
Project	Quality check and first output preparation for Vehicle NVH sensitivity analysis.
Synopsis	To perform Trim-body level quality check, Modal chart preparation and NVH console preparation for FV build.
Role	<ul style="list-style-type: none"> Trim body level and subassembly level basic model and quality check. Design mass and hardpoint verification in trim body and subassemblies. Deviation report preparation with Legacy and current model. Modal chart preparation and dynamic stiffness calculations for trim body level. NVH console preparation of Trim body for FV build which includes, FE creation , Bendi creation (op2 results with cavity model) and FRF with FV model.

Client	Volvo India Private Limited.
Project	Trim Body Truck CAB unit NVH model build and baseline Simulations.
Synopsis	Trim Body Modal and Frequency Response Analysis.
Role	<ul style="list-style-type: none"> Updating the BIW and Sub-assembly FE as per CAD. Updating the connections and basic Nastran model check. Modal chart preparation and dynamic stiffness calculations for trim body level. Frequency response analysis (NTF) run is given to Mounting locations and sensitivity is checked in the cabin at driver and passenger Hearing points. Steering, Mirror NVH modal frequency iterations and modifications. Floor mat model Build up for ACTRAN solver setup.

Client	Honda Japan
Project	New design vehicle development Modal and Frequency Response Analysis: VTF & NTF.
Role	<ul style="list-style-type: none"> Updating the BIW and Sub-assembly FE as per CAD. Updating the connections and basic Nastran model check. Eigen value analysis of complete trimmed body using Nastran to establish the natural frequency and the mode shapes. Frequency Response analysis to positively identify the Global modes and identify the resonances. Modal chart preparation and dynamic stiffness calculations for trim body level. Frequency response analysis (VTF) run is given to Mounting locations and sensitivity is checked in Steering Wheel 12o'clock, 9 o'clock, 6 o'clock and 3 o'clock position. Frequency response analysis (NTF) run is given to Mounting locations and sensitivity is checked in the cabin at driver and passenger Hearing points. Perform Frequency response analysis for Idle, Road Noise & Booming Noise. Convert the Sound Pressure (MPa) to sound pressure level (dB) and plot the P/F with Hypergraph and compare with the target lines. Operating Deflection shape (ODS) and Panel participation study for transfer path analysis and weak areas in design.

Client	Honda Japan
Project	Full vehicle integration and Model build
Role	<ul style="list-style-type: none"> • Taking care of BIP model build team and finalising the model with review. • Execution of BIP connection and interaction with onsite-team for any model related queries. • Worked on Subassemblies like Seats, Suspension, Sub frame, Steering Column and Steering gear box, Sunroof, IP panel, Closures. • Young Modulus and Frequency Tuning of specific cast components and dynamic dampers. • Calculation of Static Stiffness value of Rubber bushing rates using SOL 101. • Acoustic Modeling of coupling surface parts & Seat cushion modeling. • Full Vehicle Integration of BIW and Subassembly. • SOL111 check run for cavity coupling check between Cavity model and Wetpanel surface. • SOL103 modal run check for FV model to check for model sanity check, Rigid modes and Mechanism mode check.

Client	Suzuki Japan
Project	FE modelling of BIW, Seats, Closures , Interior trims and Bumper Fascia trims.
Role	<ul style="list-style-type: none"> • Worked on sheet metal parts as per CRASH, Strength and NVH guidelines. • Worked on Plastic parts using casting and manual geometry Mid surface extraction method. • Worked on Solid Tetra and Hexa meshing for Body mount casting parts and Seat solid parts. • Basic model check, penetration , cracks check as per standard meshing guidelines.

Client	Electrolux Sweden
Project	CAD support for PLM data migration for Home appliance products.
Role	<ul style="list-style-type: none"> • Worked on CAD support for Refrigerator, Washing machine, Dish washer Products. • 3D part creation as per 2D drawing. • 2D drawing creation as per scanned or pdf files. • Updating 3D catia part model tree as per standard PLM process. • Preparation of Excel sheet as per Team center input data requirement.

Client	Electrolux Sweden
Project	Tear down & Bench marking of refrigerator.
Responsibility	<ul style="list-style-type: none"> • Tear down of complete refrigerstor models. • Documentation of Weight , Material information, Geometry information of each parts of the assembly. • Comparison of data between Base model and Reference model. • Preparation of documentaion of overall major weight difference, Price , market demands, Performacne between models.