Vaibhav S

PROFESSIONAL SUMMARY

Aspiring CAE Engineer with hands-on experience in Finite Element Analysis (FEA), crash analysis, and structural simulations. Proficient in HyperMesh and LS-DYNA for automotive component modeling and analysis. Seeking a challenging role to apply technical expertise and contribute to innovative engineering solutions.

PROFESSIONAL EXPERIENCE

Tata AutoComp Systems Limited, Pune

CAE Engineer

August 2023 – Present

- Performed FEA modeling and analysis of automotive components using HyperMesh and LS-DYNA.
- Conducted crashworthiness simulations to ensure structural integrity and compliance with industry standards.
- Optimized meshing techniques to enhance accuracy and efficiency of simulations.

Hansol Simutech Solutions, Pune

Project Engineer

July 2022 – August 2023

- Developed finite element models of vehicle structures and components.
- Ensured compliance with client specifications and industry standards.
- Collaborated with cross-functional teams to improve simulation accuracy and efficiency.

TECHNICAL SKILLS

Software Proficiency:

- **Pre-Processor:** HyperMesh, ANSA (Basic).
- **Solver:** LS-DYNA.
- **Other Software:** MS Office.

FEA Modeling:

- 1D Meshing: Rigid connections, RBE3, weld connections.
- 2D Meshing: Sheet metal and plastic parts with varying thickness.
- 3D Meshing: Hex meshing, tetra meshing.
- **Reporting & QC:** Intersection check, connectivity check, quality control

PROJECTS

FE Modeling of HVAC Assembly

- Components: HVAC ducts, blower housing, evaporator case, heater core casing.
- Created FEM models as per client guidelines using HyperMesh.

FE Modeling of Sheet Metal Parts

- Components: BIW, seating assembly structures.
- Developed high-quality FEA models ensuring compliance with customer specifications.

3D Meshing of Solid Components

- Components: Frame plate, backplate, ratchet, ratchet rivet.
- Generated high-quality hex mesh ensuring industry standards.

Ball Drop Test Simulation

- Developed and analyzed impact simulation using LS-DYNA.
- Meshed components in HyperMesh and defined contact conditions.
- Evaluated stress distribution, impact force, and deformation behavior.

Rear Underrun Protection Device (RUPD) Analysis

- Conducted crash simulations for regulatory compliance.
- Defined boundary conditions, impactor setup, and material properties in HyperMesh.
- Interpreted results and proposed design modifications for improved crashworthiness.

EDUCATION

- **B.Tech in Mechanical Engineering**
  Bhagwant Institute of Technology, Barshi
  CGPA: 7.20
- **HSC (Higher Secondary Certificate)**
  SVMP College, Pangri, Barshi
  Percentage: 52%
- **SSC (Secondary School Certificate)**
  Sadhana Vidyalaya, Sion, Mumbai
  Percentage: 62.40%

PERSONAL DETAILS

- **Date of Birth:** 27-05-2000
- **Languages Known:** English, Hindi, Marathi