

# Swanand K.

CAE Analyst

## TECHNICAL SKILLS

### LS Dyna

Performed simulations for Drop, Impact, Blast, Seating system analysis and DRDO projects.

### Hypermesh

Meshing, connection and model preparation activities.

### Hyperview and LS Prepost

Postprocessing and simulation review

### ANSA

Basic knowledge

## ACHIEVEMENTS

### qualified GATE

2025

Gate Score - 362, All India Rank - 7874

### Project Appreciation

ELENO ENERGY LLP

01/2025

Completed project of Child Restraint Seating System for US client.

### Special recognition for project completion

ELENO ENERGY LLP

10/2023

Successfully delivered project for RhD(E) Engg (DRDO) within the stipulated timeline, ensuring all objectives were met.

## PROFILE SUMMARY

### Solution-Oriented CAE Analyst | Problem-Solving Expert | GATE 2025 qualified (AIR 7874)

Experienced and proficient CAE Analyst with overall **3.5+ years** of expertise in addressing crucial challenges with an focus on accurate solution.

- Highly skilled in technical root cause analysis, client communication and collaboration with team members.
- Strong willingness to upgrade skills required by organization.
- Proficient in various analysis techniques including Crash and safety, Drop, Modal, Fluid Structure Interaction (FSI) and Multiphysics analysis.

## PROFESSIONAL EXPERIENCE

### ELENO ENERGY LLP

CAE Analyst

09/2022 – Present | Pune, India

Domains - Defence applications, Automotive, Railways and General engineering applications

Roles and Responsibilities -

- Solve complex multiphysics simulations using LS-DYNA.
- To setup, debug and solve different loadcases (Static, dynamic and Multiphysics simulations) and created detailed reports.
- To perform various types of analyses (Implicit and Explicit).
- Collaborate with clients to understand requirements, prepare project timelines and provide technical support.
- Manage multiple projects, prioritize tasks, and meet deliverables.
- Work closely with clients team to integrate CAE results into product development.
- Setting up solver decks for EM, ALE, CESE solvers in LS Dyna.

### ELENO ENERGY LLP

Trainee CAE Engineer

02/2022 – 08/2022 | Pune, India

Roles and Responsibilities -

- Meshing for automotive components.
- Assist seniors in model building for respective cases.

## EDUCATION

### Masters in Mechanical and Material Technology

Savitribai Phule Pune University

2023 – 2025 | Pune, India

**Thesis** - Design and Optimization of Crush Can in Vehicle Bumper System for Low speed impact

Comparative study of Crush Can by LS Dyna simulation for different geometries and thickness.

### B.E. in Mechanical Engineering

Shivaji University, Kolhapur

2017 – 2021 | Jaysingpur, India



## Exceptional Performance

ELENO ENERGY LLP

11/2022

Contributed for to the crucial projects of DRDO.

## SOFT SKILLS

---

- Client communication and Result discussion
- Problem Solving
- Teamwork
- Time Management
- Leadership
- Adaptability

## LANGUAGES

---

**English**

**Hindi**

**Marathi**

Mother Tongue

## PROJECTS

---

### Seating System Analysis

Passenger car seats as per FMVSS, ECE regulations, Bus seats as per AIS regulations as well as Railway seats as per UIC 566 regulation.

- Child Restraint Seating System (CRS) analysis as per FMVSS 210 (old). (US client)
  - Dummy Positioning.
  - Type 1 belt and 6 point harness routing.
- Bus seat analysis.
  - H1-H2 test as per AIS 023.
  - EDP test as per AIS 016.
  - Stanchion pole test as per AIS 046.
- Static loadings on railway seats as per UIC 566 regulations.
- Analysis of passenger car seating system.
  - SBA and ISOFIX tests as per ECE R14.
  - LR, SBS and HRP tests as per ECE R17 regulations.

### Full Vehicle Analysis

Assistance for PhD project

Test as per FMVSS 216 -

- Roof crush Analysis for steel and CFRP roof materials.
- Dent resistance analysis for steel and CFRP roof materials

### Multiphysics simulation (DRDO Project)

Design and Analysis of Electromagnetic Railgun system

- Analysis with combination of Mechanical, Thermal and Electromagnetic solver.
- Analysis of Railgun containment structure against dynamic loadings scenarios.
- Design and optimize the projectile as per given guidelines.

### Ballistic Impact simulation on Ceramic Composite - Armour (DRDO Project)

Ballistic Impact on Ceramic Composite panels

- FE modelling of Ceramic, Layered Composite and Bullet.
- Material modelling of ceramic and composite by selection of composite failure criteria.
- Correlation of CAE results with physical test data.

### Composite Fuel Cell Stack Analysis

- CFRP layered composite FE modelling.
- Material modelling of CFRP.
- Static loadcases as per clients requirement.

### FR Pendulum Impact Analysis

- Impact on N1 category cargo vehicle cabin
- Simulation as per AIS 029 regulation.
- FE modelling and connections of Vehicle cabin.
- Result discussion with customer

### Security Barrier Analysis

Bollards, Crash rated gate, Road Blocker, Wired Fence.

- FE Modelling and loadcase setup as per PAS 68 regulation of Bollards and Crash rated gates.
- Hand calculations to suggest useful modifications.