

[Akshay S. Charde](#)

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Summary:

Conscientious **CAE Engineer** excelling at multitasking and working under pressure. Automotive industry experience includes bus structures, seating systems, automotive interiors as well as full passenger vehicles. Aims to be a potential asset by utilizing subject matter expertise for delivering world-class simulation services.

Educational qualifications:

- **B.E. Mechanical Engineering** from Kavi kulguru institute of technology & science, Ramtek with 71% (distinction) & aggregate 61% (firstclass) in year 2017.
- HSC from S.T. john's jr. college, Hinganghat with 66% in year 2013.
- SSC from S.T. john's high school, Hinganghat with 89% in year 2011.

Highlights:

- CAE Engineer with **4 years 2 months** of experience in **Crash & Occupant Safety** domain.
- Hands on experience in carrying static and dynamic load cases using **Ls-dyna**.
- **15+ simulation projects** were completed individually and delivered on time.
- Daily one to one discussions with Chinese and European counterparts.
- Products worked on : Bus structures, seating systems, Instrumental panels, Floor consoles, door panels and full passenger vehicles

Key skills:

- Onsite support
- Pre-processor: Hypermesh
- Solver: Ls-dyna & Optistruct
- Post-processor: Hyperview & Hypergraph
- Bus rollover
- Seat back strength
- Automotive interiors stiffness and misuse
- Head and Knee impact
- Post test reviews

Work experience:

Inspotech Solution – Pune, Maharashtra (02/2021 – current)

Roles & Responsibilities: Onsite CAE Engineer at **Yanfeng Automotive Interiors India, Pune.**

- Discussing with client about the budget and delivery timeline of projects.
- CAD checking and estimation of meshing work volume.
- Outsourcing the meshing work to vendor companies.
- Mesh checking and corrections using Hypermesh.
- Connections of Instrumental Panels, Door Panels and Floor Consoles assemblies.
- Materials assignment and contacts definition.
- Static and dynamic separate model preparation for different implicit and explicit loadcases.
- Models debugging
- Creating CSV for impactor positioning of different loadcases.
- Launching simulation runs using local putty or china servers.
- Post-processing simulations for checking energies, contacts, force, displacement, stress and strain plots.
- Reporting out the results using APR and simulation reports
- Delivering reports and results on time.

Projects completed:

Instrumental panels:

- Model preparation for optistruct and carrying out 2g sag, clipslot stiffness and natural frequency response analysis.
- Converting model to LS-DYNA and performing implicit analysis for IP stiffness, glove box stiffness, IP misuse and foot on IP upper loadcases.
- Carrying out explicit analysis for dynamic loadcases of head impact, knee impact, speaker ball impact and glovebox impact.

Floor consoles:

- Clipslot stiffness and natural frequency response analysis using optistruct.
- Stiffness and misuse loadcases on side panels and armrest using Ls-dyna model.
- Performing head impact on armrest in closed condition.

Door panels:

- Natural frequency response analysis using optistruct.
- Pull-cup misuse, retainer pull-off, armrest indentation and beltline tear-off loadcases to be executed on Ls-dyna model.
- Explicit analysis for Side crush cases on thorax, armrest and pelvic were performed.

Xitadel CAE Technologies – Bangalore, Karnataka (03/2019 – 09/2020)

Roles & Responsibilities: Onsite CAE Engineer at **Renault-Nissan Technology and Business Centre India, Chennai**

- Worked in Performance Planning and Passive Safety Team for Nissan group.
- Initial checking of physical test data received from NTCNA.
- Processing crash sensors data using Diadem.
- BIW deformation study after teardown of passenger vehicles.
- Processing 3D scans of passenger vehicle bodies using Space-vision.
- Checking dummy behaviors during collision event.
- Crash test analysis using pre and post test images and slow motion videos.
- Checking harness damages for electric vehicles using Animator.
- Performing different benchmarking activities for comparing the NCAP safety rating for passenger vehicles.
- Preparing injury summary according to standard NCAP safety regulations.
- Reporting out full passenger vehicle test data results using standard reports for front impact, side impact and rear impact cases.
- Discussing issue resolutions and timelines of final reports delivery with Japanese counterparts.

Projects completed:

Post test reviews for physical tests:

- Side overlap test
- Offset deformable barrier test
- Flat frontal impact test
- Side pole test
- Moving deformable barrier test

Electric vehicle post-processing for frontal impact cases:

- Harness damage study using Animator.
- Reporting out the results for not OK locations.

Safety rating benchmarking activity:

- Checking the injury parameters used for vehicle NCAP safety ratings.
- Comparison of sedan segment vehicles.

Ctrine engineering services – Pune, Maharashtra (09/2017 – 02/2019)

Roles & Responsibilities: CAE Engineer

- Checking of CAD received from customer for meshing.
- 2D meshing of plastic interior parts.
- 3D meshing of seat foams.
- Work delegation of meshing projects.
- Customer follow-up interactions for project timelines.
- Meshing project deliveries on time.
- Connections of bus structures and commercial vehicle seating systems.
- Material assignment and contacts definition.
- Load case setups
- Model debugging
- Initiating runs on local systems.
- Post-processing using Hyperview & Hypergraph.
- Report out of results.

Projects completed:

Intercity and Intracity buses:

- Meshing of bus structures.
- Weld connections using RBE2.
- Metal material assignment.
- Assigning global contacts.
- Preparing deck setup for rollover analysis using platform and survivor spaces.
- Running simulations using Ls-dyna as a solver.
- Post-processing runs to check intrusion of survivor space with main frame.
- Reporting out the results.

2 seater and 3 seater passenger seats:

- Meshing of seating systems
- Connections
- Assigning materials and defining contacts.
- Deck preparation for seat back strength test using 2 impactors and initiate runs using Ls-dyna.
- Post-processing the results to check bending in seat backs.
- Reporting out the results.

Academic project:

Design & fabrication of minibike-

The project aims to make a smaller version of a bike used for commuting in large campuses with reverse gear mechanism for parking assistance. Also to gain the experience of all design, analysis and fabrication processes which are involved in creating an automotive vehicle from scratch.

Internship:

Ashok Leyland – Bhandara, Maharashtra

The exposure to production unit involved in manufacturing 4-s, 5-s & 6-s gearboxes gave an insight regarding standard industrial practices. In person involvement in assembling the complete commercial vehicle enhanced the practical application of engineering concepts.

Affiliations & Trainings:

- Certification design courses in Creo, Solidworks & Catia.
- Certification Analysis course in Ansys.
- Corporate trainings in Hypermesh, Ls-dyna, Hyperview & Hypergraph.

Awards & Accomplishments:

- Secured the position of Head event coordinator of Mechanical engineering association in college.
- Awarded as Best employee of the quarter in Ctrine engineering services Pvt. Ltd. Pune.

Personal Details:

Father's Name:	Santosh Shashidhar Charde
Permanent address:	Charde Wada, Nehru ward, Hinganghat, Dist- Wardha, State- Maharashtra
Date of Birth:	5th of October, 1995
Languages:	Marathi, Hindi & English
Hobbies:	Cooking, travelling, listening songs, watching documentaries & Fitness.

Declaration:

I hereby declare that the above mentioned information is correct up to the best of my knowledge and I bear the responsibility for the correctness of the above mentioned particulars.

Akshay S. Charde