

SUMMARY

- **Mechanical graduate** with **6.5 years'** experience as **Vehicle Ergonomics Engineer** at Maruti Suzuki India Ltd. and Mahindra & Mahindra Ltd
- Vehicle interior occupant spaciousness and comfort related target setting for Maruti Suzuki new vehicles development
- Performing virtual & on-vehicle ergonomic studies for occupant usability
- Proficient in competitor vehicle ergonomics benchmarking
- Proficient in using ergonomic related software like RAMSIS, JACK & CAD software Unigraphics, Catia & intermediate level knowledge for visual ergonomics software SPEOS by OPTIS
- Pursuing Master's in Automotive Systems at University of Michigan-Dearborn with concentration in Vehicle Ergonomics

AREAS OF INTEREST

- Vehicle occupant packaging/ Vehicle Ergonomics
- Vehicle Integration Engineer
- Customer Usability Evaluation
- Visual ergonomics & conducting research in the field of occupant ergonomics

RELEVANT EXPERIENCE

- May2017 - Present** **College of Engineering & Computer Science, University of Michigan-Dearborn**
Research Assistant - Occupant Ergonomics (Project Team Lead)
Car Seat Comfort Analysis
- Quantifying the comfort evaluation methodology for car seat design
 - Correlating subjective evaluation methodology to different human bio-signals
 - Using Electromyography to understand muscle activity and analyzing the same in terms of discomfort & fatigue
 - Data analysis using MATLAB
- June2012 - Dec2016** **Maruti Suzuki India Ltd, Gurgaon, Haryana, India**
Ergonomics Engineer - New Model Development & Competitor Ergonomics Benchmarking
Occupant Packaging & Ergonomics
- Worked as team leader for vehicle ergonomics. Responsible for new model ergonomic target setting & vehicle interior ergonomic validation
 - Responsible for new project ergonomic target setting, occupant package layout & setting interior spaciousness targets
 - Conducting different driver visibility related researches using eye tracker to formulate visibility related requirements
 - Worked on development of new guidelines for ergonomic evaluations to satisfy occupant ergonomic requirements.
 - Conducting Physical Evaluations using mock up vehicles for different ergonomic studies like driver comfort, driver visibility, in-car controls & displays ergonomics, driver & passenger ingress egress, rear passenger spaciousness & comfort for new projects.
 - Conducting customer research studies to generate India specific customer related requirements & accordingly modifying new vehicle ergonomic requirements
- Competitor Ergonomics Benchmarking**
- Responsible for evaluating competitor models in static condition (for different vehicle interior ergonomic parameters).
 - On road vehicle testing for interior comfort & performance.
 - Conducting competitor model's virtual quantitative ergonomic assessment for driver & passenger
- Oct2010 - June2013** **Ergonomics & Digital Mock Up Engineer, Mahindra Research Valley, Chennai, India**
- Worked as the Ergonomic & Digital Mock Up engineer

- Was responsible for complete Assembly & Service Digital Mock Up and Ergonomics virtual & physical evaluations for Mahindra New Model Development
- Conducted Jury Evaluations for different Ergonomic studies for various projects
- Development of improved Design Verification Plan for Assembly and Service Digital mock up using Siemens VisMock Up & Siemens JACK software

MAJOR PROJECTS

- Vehicle occupant package target setting & vehicle ergonomic evaluation for Vitara Brezza as Ergonomic Lead Engineer
- Implemented eye tracking technology for evaluation of driver visibility preferences & requirements
- Created rear passenger head envelop for customers wearing different type of Indian Turbans
- Independently conceptualizing & specification generation for modular ergonomic test bed to evaluate vehicle occupant layout & other ergonomic related parameters for vehicles with different specification
- Setting up process and guidelines for new model ergonomics evaluation using RAMSIS
- Conducted trial project for meter cluster and windshield reflection visual ergonomics evaluation using SPEOS

EDUCATIONAL QUALIFICATION

Jan2017 - Dec2018 MSE Automotive Systems Engineering, University of Michigan - Dearborn (3.9/4 GPA)

Aug2007 - May2010 Bachelors of Mechanical Engineering (8.21 on 10 pt scale)

TECHNICAL SKILLS

- Vehicle Ergonomics - RAMSIS, JACK [Proficient]; SPEOS [Intermediate]
- Vehicle static & dynamic subjective ergonomics evaluation
- Data Analysis - MATLAB
- Testing - Portable Eye tracking device
- CAD Modeling & Design - Catia V5, Unigraphics

TECHNICAL PAPERS

- Rawat, A., Singh, A., Singh, H., and Sharma, D., "Consideration of Indian Turbans in Vehicle Design," SAE Technical Paper 2016-28-0044, 2016, doi:10.4271/2016-28-0044.