

SUDHIR S. HEBBALKAR

M.S. in CIS & IT (USA), M. Tech in Automotive Technology (INDIA), B.E. in Mechanical Engineering (INDIA)

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SUMMARY

Currently Graduate Student at University of Central Missouri. Pursuing my second Master's in CIS & IT. Automotive & software professional with overall **4.5+ years of Industrial (Automotive Field) & 2 years of teaching experience**. Worked as a CAE Engineer at Mahle, India. Worked on Finite Element Analysis (Structural & Thermo-Mechanical) of HVAC units (Linear Static & dynamic analysis of HVAC units, Battery cooling plates, HVAC doors, flaps etc.) and Engine cooling components such as Heat exchanger's, Radiator and CAC tanks, Charge air coolers, Condenser, Oil coolers and EGR. My work in Automotive Research Association of India (2012-2013) helped the organization to meet the Central Pollution Control Board Emission norms of two-cylinder turbocharged diesel engine. Worked as Lecturer at Mumbai University in Mechanical Department.

EDUCATION

2017-May 2018 (Expected)	Master of Science in Computer Information System& Information Technology. University of Central Missouri, USA. (GPA-3.4 /4)
2011-2013	Master of Technology in Automotive Technology. University of Pune, College of Engineering Pune in Collaboration with ARAI Pune, India. (GPA-8.10/10)
2005-2009	Bachelor of Engineering in Mechanical Engineering University of Mumbai, India. (Percentage-80.31/100)

CORE COMPETENCY

- Proficient in website development using HTML, Javascript, PHP and .net (C#).
- Good knowledge of Database design & physical implementation.
- Software Languages Known: HTML, Javascript, PHP, .net, C, C++, C#, JAVA, Linux, R and python.
- Expertise in Mechanical Software's: Hypermesh, Hyperview, ANSA, ANSYS, Medina, Abacus, LS-Dyna, Permas, FEMFAT, MATLAB, CATIA, CREO and GT-POWER, Ricardo Wave, AVL.
- Analysis: Structural (Stress), Thermal, Pressure, Torque, Modal, Frequency Response Analysis and NVH, Fatigue.
- Domain: FEA, CAE, CFD, Testing, Software Development, Website Development, Database and Networking.
- Effective project planning & co-ordination.
- Ability to learn modern technologies quickly.
- Team Player, Self-Motivating Personality, Smart Worker.
- Languages Known: English, Hindi, Marathi and German (Novice).

PROFESSIONAL EXPERIENCE

2013-07 - 2016-12 (3 Years 6 Months)	CAE Engineer Mahle Behr India (ES) Pune, India. <ul style="list-style-type: none">• Worked as CAE Engineer and Coordinated team of 3 CAE Engineers.• Project Planning & co-ordination with multiple teams about FEA projects.• Participated in guidelines preparation for several topics of HVAC Components.• Worked with Cross Functional Team to find out the optimal & best solution for field failure products.• Proficient & efficient in performing all types of Finite Element Analysis (Linear Static & Dynamic Analysis) & Meshing (Shell, Tetra & Hexa) for HVAC units & Engine Cooling components.• Participated in requirement gathering, design and development of new features & products.• Used Mahle Behr Methods for FEA meshing and analysis of components using Finite Element Analysis.• Co-relating FEA results with various TEST results.• Summarize all the findings of the analysis in the report.• Discussed all the results with designers and customers.• Provided design recommendations to enhance the product performance.• Worked with international customers and participated in concept and development of HVAC units, doors, flaps, battery cooling plates, brackets, engine cooling module, components and sub-components such as radiators, condensers, charge air cookers, oil coolers and EGR's using Finite Element Analysis.
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Analysis

- Linear static analysis of HVAC units, door flaps, fragrance bottle, engine cooling module & its components such as radiators, charge air coolers, condenser and EGR's for pressure, acceleration & torque loading.
- Pressure and Thermal analysis of condenser jumper tube.
- Modal analysis of HVAC units, engine cooling module, EGR & condenser.
- Frequency Response & vibration analysis of HVAC units, condenser, radiators, charge air cooler, EGR and design mounting brackets.

Achievements

- Winner of the **"Employee of the Quarter"** award for outstanding work at Mahle Behr India(ES).
- **Optimized flap and best solution** was given to OEM, which was **accepted and successfully implemented** in the product by OEM.
- Correlated FEA results with TEST results of condenser for Vibration Test. Given optimized design for condenser bracket & **received appreciation** for that work from OEM.
- Received FEA Methodology training for 3 months from training & development department (Technical Department) in Stuttgart, Germany.

2012-06 - 2013-06

(1 Year)

Intern

Automotive Research Association of India, Pune.

Master's Thesis: Performance Prediction & validation of results of Two Cylinder Turbocharged diesel engine using 1D simulation Tool.

Current trend is downsizing the engine. Turbocharging is one of the key means to achieve the high-power density in downsized diesel engines. Therefore, Turbocharging is a crucial step to increase the power output & meet the future emission norms in small two-cylinder diesel engines.

- Simulated the two-cylinder turbocharged diesel engine using GT-Power 1-D simulation tool to predict the power performance.
- Selected the suitable type of turbocharger for respective diesel engine based on simulation results and verified with manual calculations.
- Validated the simulated / predicted power performances & emission results with experimental results by actual mounting the turbocharger on to the respective diesel engine with and without intercooler.

2009-06 - 2011-06

(2 Years)

Lecturer

FAMT- Mumbai University, India

- Taught Engineering Mechanics, Engineering Drawing, Theory of Machines and Heat Transfer for undergraduate students.
- Handled Engineering Mechanics, Engineering Drawings & I.C. Engine Labs.
- Assisted faculty with administrative task & curriculum development.

AWARDS & HONORS

- Stood **4th** in **100Km** cycling event with time of **3.54Hrs** in MTB Category.
- **"Best Student Reader Award"** at knowledge Center, ARAI Pune, India.
- Secured **7th** rank in **Mumbai University** in Final year of under graduation.
- Selected for final interview of **"Best Student Award"** given by the Mumbai University for the academic year 2008-2009.
- College **Topper** during 4 years of under graduation.
- Winner of **Gold & Silver Medals** in intra college Marathon Competition.
- Winner of **Bronze Medals** in intra college High Jump Competition.
- Member of **Gold Medals** winning in intra college Volleyball Competition.
- Winner **Maharashtra Talent Search Scholarship** awarded by Maharashtra state.
- Winner of **Scholarship for High School & Primary education** awarded by Maharashtra state.

LEADERSHIP SKILLS

2006-2009

Chief Coordinator

Athletics Committee for Annual Sports Event (UTOPIA), FAMT, India.

2008-2009

Finance Committee for Annual Cultural Event (UTOPIA), FAMT, India.

INTERESTS

- Extra-curricular activities including cycling, trekking, bike riding, playing volleyball, cooking, visiting new places & event management.