

AKSHAY VAISHNAV

C-101, Dreamland Apartment, Backbone Park, B/H Balaji Hall, Rajkot-360004, Gujarat
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EDUCATION

Bachelor of Engineering in Mechanical Engineering Sanjaybhai Rajguru College of Engineering, Rajkot Gujarat Technological University, CGPA: 8.38/10.00	August 2012 - May 2016
HSC, Class XII Shree S.G. Dholakiya Higher Secondary School, Rajkot, Gujarat, 57%	June 2010 - April 2012
SSC, Class X Shree S.G. Dholakiya Secondary School, Rajkot, Gujarat, 83%	March 2009 - March 2010

SKILLS AND INTERESTS

Interests	Product Development, Design, Automobile, CAD/CAE, Finite Element Analysis, Optimization, Fluid Mechanics, Robotics, Modeling and Simulation
Design Software	Basic AUTOCAD, CATIA V5, ANSYS (Static Structural, Transient Structural, Static Thermal, Transient Thermal, Harmonic Response, Model analysis, Acoustic, Fluent), OptimumLap, MATLAB

PROJECTS

Design Optimization of Hydraulic Press Plate using Finite Element Analysis January 2016 - April 2016
Major Project as a part of curriculum

- An Industrial Defined Project in collaboration with Incredible Machines, Rajkot
- Designed and performed an FEA analysis of the plates of Hydraulic machine with the capacity of 250-ton
- Optimization in terms of design and material reduction, leading to cost effectiveness, considering minimum deformation of plates during operation

Mathematical Modeling and Analysis of a Hydro-pneumatic Suspension Column of a Car July 2015 - October 2015
Minor Project as a part of curriculum

- Modeled a 2-DOF system considering sprung and unsprung mass of the vehicle
- Performed sensitivity analysis to minimize the displacement of sprung and unsprung mass caused by vehicle hitting a bump using Transfer Function approach
- The settling time and displacement of the system were decreased using Hydro-pneumatic suspension system

Design and Thermal analysis of Disk Brake Rotor using ANSYS March 2016
GT Motorsports, a Formula Student Team of GTU

- Applied Energy Equation to calculate theoretical data for the input of simulation
- Devised boundary conditions for modeling the system by calculating including Heat power and Heat flux
- A Static thermal analysis in ANSYS Workbench using real time boundary conditions to obtain temperature distribution of Brake Rotor

Design, Development and Analysis of Exhaust System and Muffler assembly Sept 2015 - Jan 2016
GT Motorsports, a Formula Student Team of GTU

- Design and Development of complete muffler assembly for the reduction of noise under 110 dBC as per the rulebook
- Modeling and Acoustics analysis of muffler assembly in ANSYS to determine the Transmission Loss
- A CFD analysis of Exhaust Manifold using ANSYS Fluent to optimize the exhaust gas flow

RESEARCH PUBLICATION

Akshay Vaishnav, Path Lathiya, Mohit Sarvaiya” *Design Optimization of Hydraulic Press Plate using Finite Element Analysis*” Vol. 6 - Issue 5, International Journal of Engineering Research and Applications (IJERA), ISSN: 2248-9622
May 2016

INTERNSHIP/TRAININGS

Automotive Industry Simulation Internship,
Expertshub, Sinhgad Institute of Engineering, Pune
June 2015

Machining and Quality Control of Forged Connecting Rods,
Amul Group of Industries, Rajkot
February 2015

POSITION OF RESPONSIBILITY

CAE and Powertrain Lead, Formula SAE
GT Motorsports, a Formula Student Team of GTU
August 2015 - Present

- Devised the design objectives and validation of designs through simulations and testings
- Concentrated on real time simulation of Exhaust System and the noise reduction of Exhaust system
- Part of core Design group in the team helping with various design decisions
- Performed numerous simulations of various components of the car in the area of FEA and CFD segments with documentations

Head coordinator of Mechanical section at Robotics club
Sanjaybhai Rajguru College of Engineering
July 2015 - May 2016

- A college level Robotics club established by students with the aim of learning and professional skill development among students and peers
- Lead in Mechanical work of Robotics club, working mostly with CAD and Hardware systems
- Team leader and active member working to develop various robots of different concepts and configurations

EXTRA-CIRRICULAR

- STTP on **Life Long Research** under TEQIP-II, SVNIT, Surat
February 2016
- Participated in **Formula Student India**, An International FSAE competition,
Secured 9th rank overall & 4th in Endurance
January 2016
- Seminar on **Introduction to Robotics and Arduino Programming**, SRCOE, Rajkot
July 2015
- **Junkyard**, BRIZINGER'15, a National Level Techfest, GEC, Rajkot
March-2015
- Seminar on **Rapid Prototyping**, COGNIZANCE 2K14, a National Level Technical Festival,
CSPIT, Charotar
September-2014
- **Rise of Machine**, PRAKARSH 9.0, a National Level Technical Symposium, SVIT, Vasad
March-2014

DECLARATION

I hereby declare that all the details furnished above are true to the best of my knowledge and belief.