

## Akshay Vaishnav

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C-101, Dreamland Apartment, BACKBONE Park, B/H Balaji Hall, Rajkot-360004.  
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**EDUCATION**      **Bachelor of Engineering in Mechanical Engineering** August 2012 - May 2016  
Sanjaybhai Rajguru College of Engineering, Rajkot,  
Gujarat Technological University, CGPA: 8.38/10.00

**HSC, Class XII** June 2010 - April 2012  
Shree S.G. Dholakiya Higher Secondary School, Rajkot, Gujarat, 57%

**SSC, Class X** March 2009 - March 2010  
Shree S.G. Dholakiya Secondary School, Rajkot, Gujarat, 83%

**SKILLS and INTERESTS**      **Skills:** Automobile Engineering, CAD/CAE, Finite Element Analysis.  
**Interests:** Product Development, Mechanical Part Design, Optimization, Robotics.  
**Design Software:** AUTOCAD, CATIA, ANSYS.  
**Platforms:** MATLAB, MS Word, Mathematica, C.

**PROJECTS**      **Design Optimization of Hydraulic Press Plate using Finite Element Analysis** January 2016 - Present

- An Industrial Defined Project in collaboration with Incredible Machines, Rajkot.
- Designed the plates of Hydraulic machine with the capacity of 250 tones.
- Optimization in terms of design and weight reduction considering minimum deformation of plates during operation.

**Mathematical Modeling and Analysis of a Hydro-pneumatic Suspension Column of a Car** July 2015 - October 2015

- 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.
- The settling time and displacement were decreased using Hydro-pneumatic suspension system.

**Formula SAE - Design, Development and Analysis of Exhaust System and Muffler assembly** September 2015 - January 2016

A Design and CAE engineer at Team GT Motorsports, a Formula Student Team of GTU, which has represented GTU in Formula Student India(2016). My contributions to the team include,

- Design and Development of complete muffler assembly.
- 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.

**INTERNSHIP/  
TRAININGS**      **Automotive Industry Simulation Internship, Expertshub,  
Sinhgad Institute of Engineering, Pune.**      June 2015

**Forging of Rings in Forge Shop,  
Echjay Industries Pvt. Ltd, Rajkot.**      May 2015

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

**EXTRA-  
CURRICULAR  
ACTIVITIES**

STTP on "Life Long Research" in SVNIT, Surat, February-2016.

Seminar on "Introduction to Robotics and Arduino Programming", July-2015,  
SRCOE, Rajkot.

Junkyard, GEC, Rajkot, March-2015, Participated in National Level Tech fest.

Seminar on "Rapid Prototyping", CSPIT, Charotar, September-2014, Participated  
in National Level Technical Festival.

Rise of Machine, SVIT, Vasad, March-2014, Participated in National Level Tech-  
nical Symposium.

Technical Quiz, Adhithana, SRCOE, Rajkot, March-2013, Participated in National  
Level Event.

**POSITIONS OF  
RESPONSIBIL-  
ITY**

**CAE and Powertrain Lead, Formula SAE, GT Motorsports, GTU.**

- Devised the design objectives and validation of designs.
- Concentrated on real time simulation of Exhaust System and the noise reduction of Exhaust system.

**Head coordinator of Mechanical section at Robotics club,  
Sanjaybhai Rajguru College of Engineering.**

- Lead in Mechanical work of Robotics club, working mostly with CAD and Hardware systems.