

PROFILE SUMMARY

EDUCATION

- Graduation in Automotive Engineering from VIT University Vellore Institute of Technology, with 7.5 CGPA
- Intermediate from Cambridge International School CBSE Board in 2014 with 65%
- SSC from Cambridge International School CBSE Board in 2012 with 7.0 CGPA

IT SKILLS

- Software : Solid works, Photoshop , Microsoft Office, ANSYS , Cyber link and Corel

WORKSHOP SKILLS

- Working exposure on grinding machine, cutting machine, torque wrench, angle finder, spirit level, hand drilling machine for making drills in the brackets and where ever needed in making the BAJA buggy
- Lathe machine for making sleeves for the damper, for turning and facing of tripod as per the requirements'

AAKASH DOGRA

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Date of Birth: 15th AUGUST, 1995

Languages Known: English, Hindi

Major Projects

Manufacturing of a Spur gear: A Group Project under Manufacturing Processes Course

- **Activities:** Deciding the parameters of the gear wheel; processing on milling machine; modelling the gear design in SolidWorks.
- **Project Advisor:** Prof. Pankaj Tambe.

Industry Simulation case study: Developing a downsized 3-cylinder engine from a 1.3 L, 4-cylinder diesel engine which meets the companies target engine specs and also has the same architecture as that of parent engine.

- **Activities:** Proposing the required standard technologies for engine to meet the BS-V emission norms that are cost effective and meet the industry standards; analysing the vehicles in European countries that meets the EURO-V emission norms and apply them in Indian automobiles.
- **Project Head:** Mr. Ankit Gupta – B. Tech. in Automobile Engineering.

Motorcycle Airbag System - Mini-Project

- By providing the total safety to the motorcycle rider by implanting the airbags in both sides of the motorcycle we will reduce the fatality rate by 20% to 30%.

Research Publications

Analysis of Pulsar 150cc Piston by Material Optimization.

- **Brief:** The analysis carried out on pulsar piston revealed the effects of forces and temperatures acting on it. Also material optimization was carried out so that better material found to show better resistance to heat and force. Here the silumin has low values of deformation and the weight of silumin is 50g less than aluminium. So silumin can be used instead of aluminium for better life of engine.

Material Optimization of Tata ACE Chassis.

- **Brief:** The existing chassis was analysed by the finite element analysis, the stress levels are found to be 37.04 N/mm². After modifications, the chassis with suitable reinforcement, increase in thickness, addition of stiffeners, the finite element analysis was carried out, and the stress levels of chassis are found as 22.97 N/mm² which demonstrates that the modified chassis is capable to carry the loads beyond the previous payload.

Effect of aluminium oxide Nano particles with watermelon seeds oil biodiesel on the performance and emission characteristics of diesel engine - Arai Project Cum Internship

- The brake thermal efficiency values of both blends are mostly comparable. The values which are obtained are less when compared to that of diesel and at each, an every load diesel is having higher brake thermal efficiency. The brake specific fuel consumption is highest in B20 at 25% load and least in diesel. But it can be observed that the addition of aluminium oxide nanoparticles lowered the BSFC and helped reduce the average BSFC across loads making it comparable to the values of diesel

Academic Achievements

- Secured overall 3rd position in BAJA SAE INDIA 2015 and 7th in BAJA SAE INDIA 2016

- Represent 3rd time Punjab national in table tennis

Extracurricular Activities

- Part of SAE-VIT (Society of Automotive Engineers). Where I had industrial visit and events related to automotive sector.
- Industrial Visit at TVS Motors, Hosur.
- Won silver medal in basketball tournament at school during house competition