Shreyas Ravi

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Education

Oxford Brookes University, Oxford, UK
M.Sc. Motorsport Engineering — Merit
September 2018 - September 2019
- Conducted research on Driverless vehicle analysis for Formula Student Vehicle for Master's dissertation

SRM University, Chennai, India
B. Tech, Automobile Engineering — 8.3 GPA
July 2014 - May 2018
- Designing, analysis and fabrication of Variable Length Intake Manifold as B. tech project

Skills

CAD: catia, solidworks
CFD: Ansys fluent, star ccm+
Other: LS-dyna, Matlab/Simulink, Adams, EcoCal, EM-tune (*engine calibration software*), Avl vsm; MoTec i2, Ni multisim

Additional Certifications

Model-based Automotive systems Engineering
Chalmers-edX

Projects

Adaptive quarter wavelength tube (AQWT)
-Conceptualising and designing an AQWT based on the inverse of RAM air Intake for OBR formula student team to reduce noise and improve performance at 25mps piston speed
-Reduction of 3-4 dB in noise level was noticed upon testing

Cooling system for EV
-Conceptualised, designed and conducted thermal analysis using solidworks for the cooling system of the new EV vehicle of OBR formula student

Conversion of Otto cycle to Atkinson cycle
-Developed new Cam shaft design for the conversion of traditional Otto cycle to more efficient Atkinson working cycle in a 110cc CVT operated engine

Steam engine concept
-Led a team of 5 to develop a turbine concept and made a 1:28 working model of the same
-The concept was awarded the first prize for innovative thinking and excellent understanding of the concept displayed

Improvement of efficiency of a 4s-SI engine
-Proposed a roadmap for improving fuel efficiency and conducted a feasibility study in a team of 3

Experience

Team Member (AI, EV & CV)
Oxford Brookes Racing — 09/2018 – PRESENT
-Being a stand-in powertrain EV lead, managed a team of five to design, fabricate and document reports for competition
-Designing and optimizing epicyclic gearbox and cooling system for the electric vehicle while maintaining the balance between course works and managing time
-Conceptualizing and carrying out the calculations for the exhaust manifold to reduce noise and improve performance using AQWT
-Developing a lateral controller for autonomous car using simulink and fulfil hardware requirements for testing of software

Team Leader
Infieon Supermileage — 02/2017 – 04/2018
-Managing a team of 26 People, the team won Its first award overseas for technical innovation at shell eco-marathon Asia '18
-Introduced a variety of new sub teams to restructure the team to improve productivity with the limited resources available, resulting in the team attaining best Indian team status and maintaining it till date with the same philosophy

Team Driver and Powertrain Lead
Infieon Supermileage — 04/2015 – 02/2017
-Working as the combustion powertrain leader, developed a unique rear wheel hub specific for the vehicle and proposed an innovative clutch design to improve coasting distance and decrease friction
-Working with the electrical team to convert carbureted engine to fuel injected engine, while also developing ram intake and ceramic coating for piston and cylinder to improve fuel efficiency

Assembly Line Trainee
Ford, Chennai, India — June 2016
-Devising test methods for LHD & RHD vehicles while improving the efficiency of international shipping bay
-Submitting detailed reports stating the suggestions and justifying them by providing relevant evidence

SUMMER INTERN
TAFE, Chennai, India — June 2017
-Studying different gear production methodologies and understanding the gear architecture of TAFE gear cum steering casing
-Suggesting international standards be implemented and ways to implement them with the help of report

UNIVERSITY INERN
Visteon Electronics, Chennai, India — 12/2017- 04/2018
-Worked on analysis of stress development in instrument clusters using ANSYS software for analysis
-Investigated NDT methods for testing of the instrument clusters
-Proposed improvements in manufacturing technique by *collaborating with universities and other industry*

Publication

"MPC Controller for Autonomous Formula Student Vehicle", SAE Technical Paper 2020-01-0089, 2020, https://doi.org/10.4271/2020-01-0089

For more information on projects and reports, kindly visit ravishreyas.github.io/shreyas