

# 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

-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 INTERN**

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](https://github.com/ravishreyas/shreyas)