

# Shreyas Ravi

LinkedIn 24 September 1996 r-shreyas@outlook.com Eindhoven, Netherlands +31 (0) 638595613 Portfolio

## Education

- M.Sc. Motorsport Engineering** Merit  
Oxford Brookes University, Oxford, UK  
September 2018 - September 2019
- Conducted research on Driverless vehicle analysis and compared control theories for Formula Student Autonomous Vehicle as master's dissertation.
- B. Tech, Automobile Engineering** 8.3 GPA  
SRM University, Chennai, India  
July 2014 - May 2018
- Designed, analysed, and fabricated Variable Length Intake Manifold as B.tech project.

## Skills

- CAD:** Catia V5, Solidworks, Creo, Siemens NX  
**CFD:** Ansys fluent, star ccm+  
**Other:** LS-dyna, Matlab/Simulink, Adams, EcoCal, EM-tune, C++, Avl vsm; MoTec i2, Ni multisim, python

## Projects

- Driverless Formula Student Vehicle, Control strategies and event analysis
- Variable Length Intake Manifold for small 4S IC engine
- Energy storage-inverter-motor system design for FS vehicle
- CFD analysis of wing & nose of F1 car
- IED Blast simulation on V-hull tank
- Vehicle Dynamics portfolio
- Exhaust manifold Adaptive Quarter Wave Tube design
- 2020 Imp1 car qualifying and race simulation analysis
- Lap sim analysis of hybrid vs non-hybrid Imp1 cars

## Additional Certifications

- Model-based Automotive Systems Engineering (Chalmers-edX)
- Self-Driving Cars Specialisation (Coursera)
- Business Model Innovation in an Exponential World (TU/e)
- Mechatronics Systems Design (TU/e)

## Publications

- "MPC Controller for Autonomous Formula Student Vehicle", SAE Technical Paper 2020-01-0089, 2020, doi: 10.4271/2020-01-0089
- "Design optimisation of Bicycle Wheel Hub Assembly for Automotive Applications", SAE Technical Paper 2022-01-0262, 2022, doi: 10.4271/2022-01-0262

## Experience

- Design & Development Engineer (research) – Automotive Systems Design**  
Eindhoven University of Technology, Netherlands 10/2022 – PRESENT
- The Experience emphasizes technical and professional competencies for designing efficient high-tech automotive systems.
  - Developed Software for extrinsic calibration of ImRadar & camera in matlab achieving less than 15% error.
- **Systems Design Engineer Trainee – Tin Mechanics**  
ASML Holding N.V, Netherlands 10/2023 – 03/2024
- Conceived and executed virtual simulation models to optimize the performance of a high pressure-high temperature thermodynamic system, resulting in a 15% increase in efficiency and a 20% reduction in energy consumption.
- **Design and Development Engineer - Intern**  
DAF Trucks N.V, Netherlands 05/2023 – 10/2023
- Conceptualised and developed a Range Estimation tool tailored specifically for electric trucks using insights from Diesel truck data.
  - Incorporated road gradient information from open-source platforms to enhance range estimation accuracy by an estimated 10-15%.
  - Devised a methodology for precise range estimation of up to 5% without relying on simulation techniques.
- Sr. Mechanical Engineer**  
Coexlion, Bengaluru, India 04/2022 – 10/2022
- Conducted CAE-FEA analyses on chassis for OEM clients, notably Royal Enfield.
  - Utilized 1D modelling and mathematical simulations to analyse kinematic parameter of suspension and steering sub-systems.
  - Defined control strategies and designed motor controllers with an entrepreneurial mindset.
- Research & Development Mechanical Engineer**  
InGO Electric, Bengaluru, India 04/2020 – 03/2022
- Led a technical design team of four to develop an innovative powertrain system featuring an SRM Motor for enhanced low-end torque utilization.
  - Created a mathematical 1D Matlab/Simulink model for the motor-CVT setup.
  - Collaborated with the CAE team to formulate load cases for static and fatigue loading at component and full vehicle levels.
  - Engineered an MBD (Multi-Body Dynamics) model to optimize Vehicle Dynamics parameters.
  - Secured victory in Altair Start-up Challenge, winning a sum of INR 5 lac award.
- Team Member (AI, EV & CV)**  
Oxford Brookes Racing, Oxford, UK 09/2018 – 01/2020
- Led a team of five as Powertrain EV Lead, overseeing the design, fabrication, and documentation of competition reports.
  - Spearheaded the conceptualization and execution of calculations for the exhaust manifold, achieving a notable reduction in noise by 3-4 dB while enhancing performance through AQWT methodology.
  - Innovated the development of a lateral controller for autonomous vehicles utilizing Simulink, alongside defining hardware requirements for software testing as a Control Systems Engineer.
- Team Leader**  
Infieon Supermileage, Chennai, India 02/2017 – 04/2018
- Spearheaded a team of 26 individuals, achieving international acclaim for technical innovation at Shell Eco-Marathon Asia '18.
  - Pioneered the implementation of diverse sub-teams, strategically restructuring operations to enhance productivity despite resource constraints.