Shreyas Ravi

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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, analyzed, 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: 10.42771/2022-01-0262

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
- Virtual simulation based development of High pressure-high temperature thermodynamic system

Design and Development Engineer - Intern
DAF Trucks N.V, Netherlands 05/2023 – 10/2023
- Developed Range Estimation tool for electric truck based-on Diesel truck's data
- Road Gradient integration in the data from open source
- Methodology developed to estimate range without simulation

Founder & Technical Officer
RS Automotive pvt ltd, Bengaluru, India 01/2020 – 10/2022
- Automotive 2W and 3W electric vehicle Consultancy.
- Technical support for organizations and start-ups in chassis, CAE & kinematics.
- Vehicle integration: CAD, CAE, GD&T, DFM, DFMA, FMEA, etc.

Sr. Mechanical Engineer
Coexlion, Bengaluru, India 04/2022 – 10/2022
- Performed CAE, FEA analysis for OEM-tier 1 clients, notably Royal Enfield.
- Conducted 1D-Modelling and mathematical simulation of sub-systems.
- Modelling kinematic parameters of Automotive sub-systems.
- Defined Control strategies and Motor Controller design.

Sr. Research & Development Mechanical Engineer
InGO Electric, Bengaluru, India 04/2021 – 03/2022
- Led the technical design team of 4, to develop novel powertrain system with SRM Motor to effectively utilize the Low-end torque.
- Developed mathematical 1D matlab/simulink model of the motor-CVT.
- Facilitated the CAE team with the formulation of load cases, encompassing static and fatigue loading, both at the component and full vehicle level.
- Developed MBD (Multi-Body Dynamics) model for studying Vehicle Dynamics parameters.
- Won the ASC '21 (Altair Start-up Challenge), securing INR 5lac award.

Team Member (AI, EV & CV)
Oxford Brookes Racing, Oxford, UK 09/2018 – 01/2020
- Being powertrain EV lead, managed a team of five to design, fabricate and document reports for competition.
- Conceptualized and carried out the calculations for the exhaust manifold to reduce noise by 3-4 dB and improve performance using AQWT.
- Developed a lateral controller for autonomous car using Simulink and hardware requirements for testing software, being control systems engineer.

Team Leader
Infieon Supermileage, Chennai, India 02/2017 – 04/2018
- Managed 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, improving productivity with the limited resources available