SASANGA ATHURALIYA

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PROFILE

I am passionate about automotive design and aerodynamics, pursuing a B.Sc. (Hons) in Automotive Engineering at CINEC Campus. I am also skilled in SOLIDWORKS with hands-on experience in workshop training and automotive technician roles. I have a strong leadership background as an active Rotaract member, organising projects that foster teamwork and community engagement. I aspire to specialise in aerodynamics within motorsports and contribute to innovative engineering solutions.

TECHNICAL SKILLS

- Vehicle Scanning & Diagnosing
- Vehicle Repairing & Maintenance
- Computer-Aided Design
- Finite Element Analysis
- Computational Fluid Dynamics
- Vehicle Modelling & Simulation
- Vehicle Design & Development
- Vehicle Testing & Validation
- Vehicle Performance Analysis

SOFT SKILLS

- Project Management
- Team Leadership
- Technical Communication
- Problem Solving
- Time Management
- Adaptability
- Creativity

LANGUAGE

- Sinhala
- English

VOLUNTEER

- **General Member**
  Apr 2024 - Present
  Ceylon Motor Sports Club (CMSC), Colombo
- **General Member**
  Oct 2022 - Present
  Rotaract Club of CINEC Campus, Malabe

EDUCATION

- **G.C.E. Ordinary Level Examination (2018)** **Jan 2008 - Dec 2018**
  Ananda College, Kottawa
- **G.C.E. Advanced Level Examination (2021)** **Jul 2019 - Feb 2022**
  Royal College, Colombo 07
- **B.Sc. (Hons) in Automotive Engineering** **Oct 2022- Present**
  CINEC Campus, Malabe
  Pursuing a comprehensive degree (~292 ECTS), with practical experience in vehicle dynamics, powertrain integration and sustainable mobility solutions.

WORK EXPERIENCE

- **Engineering Undergraduate Representative** **Oct 2022 - Present**
  CINEC Campus, Malabe
  Act as liaison between students and faculty, addressing academic concerns, organising batch events and ensuring a positive learning environment.
- **Assistant Club Service Director** **Jun 2023 - May 2024**
  Rotaract Club of CINEC Campus, Malabe
  Led service initiatives and supported club operations, helping the club win recognition and awards during the year. Focused on fellowship, engagement, and impact.
- **President** **Mar 2025 - Present**
  Society of Automotive Engineering of CINEC Campus, Malabe
  Co-founded and led the society to unite automotive undergraduates. Oversee events, industry connections and project development to promote automotive technical excellence.
- **Automobile Technician - Internship** **Jul 2025 - Present**
  Diesel & Motor Engineering PLC, Colombo
  Gaining hands-on experience in vehicle diagnostics, engine systems and maintenance procedures at a leading automotive service provider.

CERTIFICATIONS

- **Workshop Practice 1 - WP1** **Nov 2023**
  Ceylon German Technical Training Institute, Moratuwa
- **SOLIDWORKS CAD Design Associate - CSWA** **May 2025**
  SOLIDWORKS, Dassault Systèmes
- **SOLIDWORKS CAD Design Professional- CSWP** **Jul 2025**
  SOLIDWORKS, Dassault Systèmes

ACADEMIC PROJECTS

- **F1 Model for Aerodynamic Performance Analysis Using CFD** **Feb 2025 - Mar 2025**
  Conducted a CFD-based aerodynamic study of three Formula 1 car models designed in SOLIDWORKS, focusing on drag coefficient (Cd) optimisation for high-speed performance. Simulations were performed under controlled conditions.
  - Model 01 (Base): Cd = 0.826
  - Model 02 (with DRS): Cd = 0.791
  - Model 03 (with DRS + Splitter): Cd = 0.773

  Despite limitations, the results reflected realistic aerodynamic trade-offs observed in F1, where Cd values between 0.7–1.2 are typical to balance drag and downforce. The project highlights the role of design modifications like DRS and aerodynamic splitters in optimizing performance and stability in professional motorsport applications.
- **Shock Spoke Wheel Mechanism for Enhanced Motorbike Suspension** **May 2025 - Jun 2025**
  Designed and analyzed a novel wheel with integrated shock-absorbing spokes to enhance ride comfort on rough roads. Applied SOLIDWORKS for 3D modeling and FEA for structural behavior under dynamic loads.
- **Series Hybrid System Demonstration Unit** **Nov 2024 - Present**
  Designed and built Version 01 of a series hybrid drivetrain where a 24V motor drives a mechanical system via a custom pulley mechanism. Developed the control system using Python on Raspberry Pi 5, enabling real-time signal processing and system logic control. Focused on drivetrain layout, motor integration, and embedded system programming.

NON-ACADEMIC PROJECTS

- **Project Oceanus 2.0** **Jun 2024 - Aug 2024**
  Rotaract Club of CINEC Campus

  An environmental initiative aimed at protecting and sustaining marine life in Sri Lanka through awareness and conservation.
  - Phase I: Conducted an expert-led awareness session on coastal ecosystems, marine biodiversity, and environmental threats, fostering community education and engagement.
  - Phase II: Implemented hands-on sea turtle conservation efforts, including beach clean-ups, nest monitoring, and community collaboration to reduce human impact and support sustainable coastal practices.

  Recognition: Featured in Rotary Projects Around the Globe – November 2023 Edition by Rotary International
- **Project Oceanus 3.0** **Jun 2024 - Aug 2024**
  Rotaract Club of CINEC Campus

  A three-phase marine and coastal ecosystem protection project was organised in collaboration with the National Cleaner Production Centre (NCPC) & Ocean University, Tangalle.
  - Phase I: Beach Cleanup (Modara Beach): In honour of International Coastal Cleanup Day, over 50 Rotaractors collected 200+ kg of plastic waste. Custom sand-sifting sieves were developed and donated to NCPC.
  - Phase II: Mangrove Restoration (Rakawa Lagoon): Volunteers collected and planted mangrove seeds to restore the lagoon ecosystem.
  - Phase III: Sea Turtle Conservation (Rekawa Beach): With wildlife authority guidance, volunteers secured over 300 sea turtle eggs and built protective fencing to safeguard nesting sites.
- **Project Numinous** **July 2023 - Jun 2024**
  Rotaract Club of CINEC Campus

  Led a community initiative with four phases to celebrate and showcase the equal rights and cultural diversity of major religions in Sri Lanka, including Buddhism, Hinduism, Islam, and Christianity. The project promoted mutual respect, peace, and social harmony through events and awareness campaigns involving students and local communities, enhancing intercultural understanding and unity on campus.

  Bronze Award: Most Outstanding Club Service Initiative Fellowship (Internal) at the 34th Rotaract District Assembly 2023/24
- **Project Randoli** **Jun 2024 - Aug 2024**
  Rotaract Club of CINEC Campus

  Organised and executed the first phase of Project Numinous, focusing on Buddhist culture and community engagement during the Kandy Esala Perahera. The initiative provided Rotaractors with hands-on experience in cultural volunteering, strengthened internal fellowship, and promoted awareness of Sri Lanka's religious heritage. Served as a foundation for the broader interfaith activities of Project Numinous.

  Gold Award: Most Outstanding Club Service Initiative Fellowship (Internal) at the 35th Rotaract District Assembly 2024/25

REFERENCES

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