HIRDITYA SASIKUMAR

Bachelor of Engineering (B.E.) – Mechanical Engineering
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PROFESSIONAL PROFILE

As a passionate mechanical engineer, I am driven by a keen interest in problem-solving and gaining hands-on experiences. Eager to acquire new skillsets and broaden my horizons, I consistently strive to deliver my best on any given platform!

EDUCATION

Degree	Name of Institution	Board/ University	Year of Passing	CGPA/ Percentage of marks
B.E. Mechanical Engineering	College of Engineering, Guindy, Anna University	Anna University	2026	8.82*
HSC	Prince Matriculation Higher Secondary School, Madipakkam	State Board	2022	98.67%
SSLC	Prince Matriculation Higher Secondary School, Madipakkam	State Board	2020	93.8%

WORK EXPERIENCE

In plant Trainee - Daimler India Commercial Vehicles **Jun 24 - Jul 24**

- Analyzed service data of trucks to select appropriate vehicles for engine oil sample testing
- Created a **Power BI** report to graphically represent the various parameters in engine dynamometer testing

COLLEGIATE CLUBS AND SOCIETIES

Team CEG Motorsports

Suspension Lead & TIG Welder **Mar 25 - Present**

- Engineered suspension kinematics and structural components to optimize the performance and handling of an ATV, overseeing full-cycle fabrication through coordinated team collaboration
- Developed custom welding fixtures and performed TIG welding for a chromoly tubular chassis, as well as other structural and mechanical components

Steering Vertical Member & Virtual Dynamics Lead **Apr 23 - Feb 24**

- Exploring the intricacies of vehicle dynamics, its design & analysis (**SolidWorks and ANSYS**), logistics and fabrication (machine handling, 5S), skilled in report and presentation creation
- Engaged in utilizing **IPG CarMaker** and **Altair HyperWorks** for virtual dynamics and design optimization

Documentation Coordinator - Society of Mechanical Engineers **Oct 23 - Mar 24**

Conducted personal interviews, authored and edited articles for two editions of the SME magazine [Certificate]

PROJECTS

Pneumatic Sheet Metal Bender **May 24**

Involved in its design and cost-efficient fabrication, performed **explicit dynamics** in ANSYS to calculate force required to deform the sheet metal

Flatness study using Electronic Level **Nov 24**

Utilized the Talyvel 6 Electronic Level to accurately assess surface flatness across a given surface

IoT-Based Vibration Monitoring and Analysis in 3D Printers **Active**

To monitor vibrations at the nozzle and bed during 3D printing and correlate with the corresponding defects in the products and minimize them

HACKATHON

Virtual EV challenge (Organized by IPG & Bosch) **Jun 25 - Present**

- Developed a **SIMULINK**-based Functional Mock-up Unit (FMU) that computes target velocity for energy-efficient EV travel using real-time vehicle and traffic data. Integrated with IPG Carmaker, achieving a **23%** improvement in final SOC
- Developing a FMU and intelligent **Python**-based agents to optimize EV charging by dynamically booking stations at optimal intervals in a highway

SKILLS AND LANGUAGES

Technical Skills

- SolidWorks
- MATLAB - SIMULINK
- IPG CarMaker
- CATIA
- Ansys
- Python
- Creo
- Altair HyperWorks
- MS Office 365

Traits

- Leadership
- Brainstorming
- Adaptability
- Team spirit
- Creativity
- Smart work

Languages - English, Tamil

WORKSHOPS

- Participated in **EV Motor Control** by Society of Electrical & Electronics Engineers (SEEE)
- Visit to Mahindra Research Valley (MRV) for a student-only workshop on the Future of Born-EVs

ACHIEVEMENTS

- We as a team secured Best Debutant Team, AIR 3 in Sled Pull Event, AIR 2 in Maneuverability event, and an Overall AIR 4 in e-BAJA '24.
- We as a team secured Four Podiums for AIR 2 in Drag Race, AIR 1 in Dirt Race, AIR 1 in Night Endurance and OVERALL AIR 1 in Mega ATV Championship 2025
- Conducted a Workshop on 'Introduction to Vehicle dynamics and Powertrain Systems' with my fellow mates from CEG Motorsports in an inter-college symposium
- Official Student Member of SAEINDIA.