Utkarsh Singh

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Education

Delhi Technological University **Dec 2021 – May 2025**

Bachelor of Technology in Mechanical Engineering *CGPA: 7.0*

Relevant Coursework

- Control Systems
- Theory of Machines
- Automobile Electronics
- Industrial Engineering
- Engg. Analysis & Design
- Operations Management
- Manufacturing Tech.
- Engineering Mechanics

Experience

Shriram Pistons and Rings Ltd. **June 2023 | 4 week | on-site**

Industrial Trainee | Certificate *Ghaziabad, UP*

- Collaborated with supervisors to ensure smooth factory operations and maintain productivity and quality standards.
- Conducted inspections and tests on machines, promptly identifying potential issues and minimizing downtime.
- Engaged with employees to ensure adherence to quality guidelines and encouragement for optimal performance.
- Provided insights and suggestions for process optimization and workflow enhancements.

Projects & Research

Optimizing Electric Vehicle Efficiency with Real-Time Telemetry | *Paper Link* **August 2023**

- Conducted research on optimizing electric vehicle efficiency using real-time telemetry data.
- Explored use of machine learning algorithms, including linear regression and lasso regression, to analyze collected data and identify optimal moments for acceleration or deceleration.
- Demonstrated proficiency in data visualization and processing, utilizing sensors like piezoelectric and GPS sensors, to analyze coasting and braking points and determine the vehicle's location.
- Increase in energy efficiency achieved was **10.6%** higher than original method without the feedback system.
- The paper has been **accepted for presentation** at the **ICMRE 2024** conference scheduled to be held in Milan, Italy.

Eigen Supermileage Vehicle | *Project Link* **Jan 2022 – Oct 2022**

- Contributed to development of powertrain and energy provision systems. Optimised chaindrive to gear ratio 4.3:1.
- Engineered an efficient lighting system for vehicle, minimizing battery power consumption.
- Collaborated on implementation of ML to develop an optimal driving path and behavior, maximizing vehicle efficiency.
- Vehicle was awarded **Second place** for Data and Telemetry Awards among **120+ teams across Asia.**

Technical Skills

Languages: C/C++, Python, Latex
Softwares: Solidworks/Fusion 360, Ansys, Arduino IDE, Linux, Unity 3D, GitHub, ROS, MS-Office
Technical: CAD, CAM, GD&T, Additive Manufacturing, Micro-controllers
Areas of Interest: Robotics and Automation, Nanogenerators, Cybersecurity
Soft Skills: Problem Solving, Self-Learning, Team Work, Adaptability, Leadership

Leadership / Extracurricular

DTU Supermileage **May 2023 – Present**

Captain *DTU*

- Spearheaded development of an electric urban concept vehicle with a goal for efficiency and sustainability that participated in Shell Eco Marathon competition.
- Team was **runner up** in Asia for Data and Telemetry Award. Used in-vehicle telemetry and feedback mechanisms.
- Designed and optimized a lightweight, high-strength chassis for a supermileage vehicle prototype, ensuring load-bearing capacity of up to **1000N** and contributing to enhanced performance.
- Utilized simulation softwares and 3D printing for innovative vehicle design, optimized ram air intake for GX80 engine for prototype vehicle. **Improved mass flow rate by 36.8%.**

Engifest DTU **March 2022 – Sept 2022**

Public Relations Associate *DTU*

- Conducted college visits, successfully boosting Engifest DTU's Instagram followers by 200+ students through event promotion.