Utkarsh Singh

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Education

Delhi Technological University **Dec 2021 – May 2025**
Bachelor of Technology in Mechanical Engineering *Delhi, India*

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 – 1 month**
Industrial Trainee *Ghaziabad, UP*

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

Projects

ARsenal Game | *Unity 3D, Arduino* **January 2021**

- Developed an innovative AR First-Person Shooter (FPS) game utilizing hand gestures as primary input method.
- Implemented ultrasonic and IR sensors with Arduino to capture real-time gesture inputs, translating physical movements into in-game actions.
- Established interface between sensor data and Unity 3D game engine, allowing for accurate gameplay experience.
- Secured a **track winner** accolade in a competitive hackathon, showcasing project's approach and integration of technology and gameplay.

Project Eigen | *Solidworks/Ansys, PCB Design, Smart BMS, arduino, AI/ML* **Jan 2022 – Oct 2022**

- Contributed to development of powertrain and energy provision systems for supermileage vehicle.
- Engineered an efficient lighting system for vehicle, minimizing battery power consumption.
- Collaborated on implementation of ML algorithms to develop an optimal driving path and behavior, maximizing vehicle efficiency.
- Vehicle was awarded **second place in Asia** for Data and Telemetry Awards.

Technical Skills

Languages: C/C++, Python, Latex
Softwares: Solidworks, Ansys, Arduino, LINUX, Unity 3D, Github, ROS, Office
Technical: CAD, CAM, CFD, Micro-controllers, GD&T, Additive Manufacturing
Areas of Interest: Robotics and Automation, 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 which participated in Shell Eco Marathon competition.
- Team was runner up in Asia for Data and Telemetry Award by integrating in-vehicle telemetry and Pace 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%.**