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**Mechanical Engineering Student with Powertrain and System Development Experience**

**Summary**

Mechanical Engineering student with hands-on experience in electric and combustion powertrains, system design, and software-integrated mechanical solutions. Proven ability in CAD modelling, Java-based GUI development, and Raspberry Pi-based network-attached storage (NAS) infrastructure. Combines technical acumen with teamwork, problem-solving, and system optimization skills.

**Skills**

* CAD & 3D prototyping (SolidWorks)
* Java programming, Swing GUI and MySQL integration
* Linux-based server setup, Docker, NAS infrastructure
* Mechanical Testing and Data Analysis
* Inventory Management System Design
* System Security, Networking (Tailscale, CLI )

**Experience**

**Powertrain Engineer**  
*Team ETA India, KJSCE*  
10/2024 – Current | Mumbai, India

Worked on combustion and electric powertrain systems in student vehicle projects. Currently leading electrification efforts.

* **Design Review**: Evaluated technical documents for design compliance.
* **Process Optimization**: Recommended workflow improvements using FMEA and test data.
* **Cross-Functional Collaboration**: Worked with drivetrain, electronics, and chassis sub-teams.
* **Testing**: Designed tests for transmission and powertrain systems.
* **Fabrication**: Used 3D printing and machining tools for prototypes.

**Developer – Inventory Management System (Java + MySQL)**  
01/2025 – 04/2025 | Personal Project

Designed a fully functional desktop-based inventory management system with real-time database integration.

* Created a **Swing-based GUI** for managing warehouse/shop items.
* Developed **CRUD operations** for items using **MySQL + JDBC**.
* Implemented sales logic, input validation, and visual feedback using JOptionPane.
* Ensured secure SQL interaction with PreparedStatement.
* Applied structured GUI layout with multiple JPanels, consistent styling, and usability features.

**Home NAS & Self-Hosting Infrastructure (Raspberry Pi 5)**  
02/2025 – Present | Personal Lab

Converted Raspberry Pi 5 into a smart NAS and Docker-based hosting system with remote VPN access.

**Raspberry Pi NAS Developer**  
*Feb 2025 – Present*

* Built a Docker-based NAS with CasaOS, Nextcloud, and Cockpit on Raspberry Pi 5.
* Configured remote access via Tailscale VPN and added firewall protection.
* Integrated 1TB Kioxia NVMe via GeeekPi M.2 HAT for high-speed storage.

**Education**

**B.Tech. Mechanical Engineering [Expected in 04/2028]**  
K. J. Somaiya College Of Engineering – Mumbai, India