Ketan Singh

Electrical Engineering Student

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SUMMARY

I'm a Third-year B.Tech Electrical Engineering Student. Ranking in the top 5 of my branch, I have a strong grasp of core subjects like Power Electronics, Electrical Machines, and Control Systems. Proficient in Simulink (Matlab), I have hands-on experience in 3-phase systems, transformers, motors, and microcontrollers (ESP32, Arduino, TMS320F2879D). I aspire to make a meaningful impact in the field of electrical engineering through innovation and dedication.

PROJECTS

Design and Development of a Bicycle based on BLDC Motor Drive   *Mar. 2024 – Present*

- Developing an electric bicycle using a BLDC motor drive and an electric cycle conversion kit.
- Implementing a closed-loop control system with TMS320F2879D for speed and torque regulation.
- Aiming for stable motor control and enhanced efficiency under varying load conditions.

Design and Simulation of Converters using Simulink   *Dec. 2023 – Present*

- Simulating various power converters using Simulink for performance analysis.
- Implemented simulations for rectifiers, AC-DC converters, and buck-boost converters.
- Developed models for 5-phase and 6-phase PWM inverters to study multi-phase operations.
- Working on closed-loop configurations for enhanced control and stability.

Design of Full-Wave Rectifier PCB   *Completed*

- Developed a full-wave rectifier PCB using through-hole technology with a capacitive filter for output smoothing.
- Successfully implemented the rectifier circuit to drive a DC motor, ensuring smooth operation.
- Conducted performance tests under various load conditions, optimizing the design for enhanced efficiency and reliability.

EDUCATION

Rajiv Gandhi Institute Of Petroleum Technology

Bachelor of Technology - Electrical Engineering (Major in E-vehicles)   *2022 - 2026*

- CGPA: 8.70 (Till 4th Semester)

Jain International School

Senior Secondary   *2022*

- Grade: 86%

Maharana Pratab Group of Institutions

Secondary School   *2020*

- Grade: 96%

TECHNICAL SKILLS

Languages: Python, C, C++, Matlab
Softwares: Simulink, AutoCAD, Proteus
Hardware: Arduino UNO, ESP32, TMS320F2879D, DS1104

VOLUNTEER EXPERIENCE

Gyanarpan Project Amethi   *Aug. 2023 – July. 2024*

Teaching Volunteer

- Provided quality education to underprivileged students.
- Implemented educational initiatives for community upliftment.
- Fostered a positive learning environment for students in need.

POSITION OF RESPONSIBILITY

IEEE RGIPT   Jan. 2024 – Present

Event Management Head

Rajiv Gandhi Institute Of Petroleum Technology   Aug. 2024 – Present

Student Placement Coordinator

Rajiv Gandhi Institute Of Petroleum Technology   Aug. 2024 – Present

Student Teaching Assistant