

# Milan Kumar

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■ Bijnor, Uttar Pradesh

## Career Objective

Highly motivated and detail-oriented Electronics & Communication Engineer with 3+ years of hands-on experience in embedded systems, hardware development, and production operations. Proven ability to lead teams, coordinate across departments, and deliver high-quality embedded solutions. Seeking to contribute my skills in a dynamic and growth-focused organization.

## Education

Qualification	Institution / Board	Year	Marks/CGPA
B.Tech – ECE	AKTU, Lucknow	2022	7.6 CGPA
Diploma – EC	Board of Technical Education, Lucknow	2019	64%
12th (Science)	SMIC College, Amroha (U.P. Board)	2017	52%
10th	DDPS School, Bijnor (CBSE)	2013	5.9 CGPA

## Professional Experience

### Electronics Engineer – IC Electrical Company Limited, New Delhi

■ July 2022 – Present (3 years 2 months)

- ✓ Led a 15-member team in the production department, ensuring quality output and timely delivery.
- ✓ Executed end-to-end production processes, from hardware assembly to functional testing.
- ✓ Acted as the key bridge between R&D; and Production teams.
- ✓ Developed and maintained embedded systems using microcontrollers.
- ✓ Designed and troubleshoot PCB circuits for railway-grade systems.

## Technical Skills

- Embedded Systems (AVR, PIC, ARM)
- PCB Design & Hardware Troubleshooting
- Power Electronics (Inverter Systems)
- MOSFET, IGBT
- Tools: Multimeter, Power Supply, Oscilloscope, Soldering Station

## Soft Skills

- Strong Communication
- Team Leadership
- Problem Solving
- Time Management
- Interdepartmental Coordination

## Projects

### Passenger Information System – Indian Railways

Developed a microcontroller-based Passenger Information System (PIS) for displaying real-time updates in train coaches. Integrated LED/LCD display modules with a robust power management circuit. Ensured system reliability across different weather and voltage conditions.

*Technologies/Tools: Microcontrollers, PCB, Power Supply, LCD Interface*

### Emergency Light Unit – Indian Railways

Designed and implemented a fail-safe emergency lighting unit for train coaches. The system automatically switches to backup power during outages, providing continuous illumination using high-efficiency LEDs. Built with overcharge protection and battery status indicators.

*Technologies/Tools: Battery Backup System, LED Arrays, Charging Circuit, PCB Design*

#### **Integrated Signal Lamp (Primary & Secondary)**

Developed a dual-signal lamp unit for primary and secondary signaling in railway yards. Ensured redundancy and failover capabilities with automatic switch-over between units. System designed to meet Indian Railways' safety and durability standards.

*Technologies/Tools: High-Intensity Lamps, Relay Circuits, Microcontroller Control Unit*

#### **100VA Inverter System – Indian Railways**

Built a 100VA inverter system to support low-voltage operations in train compartments during power failure. The inverter provided consistent AC output from DC supply, with short-circuit protection and auto-reset features.

*Technologies/Tools: Power MOSFETs, Inverter Circuit, Heat Sink, PCB, Battery Interface*

#### **Public Address & Passenger Information System – Indian Railways**

Engineered an integrated audio-visual communication system for coaches and stations. Combined automated announcements with visual display boards, synchronized through a central control system. Enabled emergency announcements and multilingual support.

*Technologies/Tools: PA System, Microcontroller, Speaker Units, Display Boards, Amplifier Circuits*

#### **ERRU – Indian Railways**

Developed and implemented an Electronic Regulating and Rectifying Unit (ERRU) for railway systems ensuring stable voltage regulation, rectification, and reliability under varying load conditions.

*Technologies/Tools: Rectifier Circuits, Control Electronics, Power Management*

#### **RBC – Regulated Battery Charger (Indian Railways)**

Worked on the design and development of a Regulated Battery Charger (RBC) unit to provide stable and efficient battery charging for railway systems, ensuring long battery life and reliable operations.

*Technologies/Tools: Power Electronics, Control Circuits, Battery Management Systems*

### **Languages Known**

- Hindi (Fluent)
- English (Professional Proficiency)

### **Highlights**

- ✓ 3+ years in embedded and electronics manufacturing
- ✓ Real-world experience with Indian Railways projects
- ✓ Strong leadership in technical teams and production coordination
- ✓ Expert in both hardware and embedded software systems