



# Kartik Verma

Electronics Engineer,

**Education:** B.Tech, Electronics and Communication (2019-2023)

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## WORK EXPERIENCE

### Electronics Engineer

Light Guide Optics Pvt Ltd

01/2023 - Present

Indore

*Achievements/Tasks*

- Developed schematics and **PCB layouts for 10+ projects**, including transceivers, motorized illuminators, and custom microcontroller boards. .
- Designed and implemented **control systems for 3+** projects that includes translation stages, enabling precise positioning in opto-mechanical systems.
- Optimized Hall Effect thruster systems, improving **efficiency by 20%**.
- Created **embedded systems** using **microcontrollers** (ESP8266, Atmega328p) and **FPGAs** (ALINX AX7102).
- Implemented **transceiver systems** for chemical identification and motorized collimators for optical applications. Implementations were done in response to **specific customer needs** or requirements.
- Provided maintenance and support for **6+ complex systems** to ensure reliability.

### Data Annotation Intern

Roboro Systems Pvt Ltd

07/2022 - 09/2022

Indore

*Achievements/Tasks*

- Led data collection using machine vision cameras.
- Enhanced data quality through preprocessing techniques.
- Ensured model accuracy with rigorous data validation.
- Applied DarkMark, DarkNet, and Yolo for image processing.
- Tested and deployed systems in real-world scenarios.

## EDUCATION

### B.Tech

Prestige Institute of Engineering Management and Research

07/2019 - 06/2023

Indore

*Courses*

- Electronics and Communication Engineering.

## SKILLS

Digital & Analog Circuit Design

System Integration

Precision Soldering & Assembly

Troubleshooting

Hardware design & development

Microcontroller

Microsoft Office

Component selection & testing

Adaptability

Teamwork

Creativity

## PROJECTS

Transceiver for SCI (07/2023 - Present)

- Collaborated in the design and **development of schematic**, PCB, and circuit for an FPGA baseboard project.
- Assisted as an electronics helper, providing support in various aspects of the **project's implementation**.
- Contributed to a **collaborative team effort**, ensuring the project's completion and readiness for testing. Played a key role in the successful delivery of the product.

Motorised Illuminator Collimator  
(10/2023 - 04/2024)

- Custom **PCB design** for motorized illuminator collimator, integrating precision motor control algorithms.
- Close **collaboration with customers** for tailored user interface and functionality.
- Rigorous testing and successful deployment on customer site, **ensured reliability** and satisfaction.

PCB Defect Detection System (08/2022 - 06/2023)

- Developed a PCB defect detection system integrating machine learning and electronics technologies.
- Utilized advanced machine learning frameworks such as Darkmark, Darknet, and YOLO for accurate defect identification.
- Applied fundamental electronics knowledge to design and implement hardware components for the detection system.
- Successfully completed the project, demonstrating proficiency in integrating machine learning with electronics for practical applications.

## ACHIEVEMENTS

Silver Medal - Aavishkaar 2023

Master Vaishnav 2018

## INTERESTS

Volleyball

Music

Traveling