

# Kartik Chaudhary

**Firmware Engineer (Research & Development)**

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## PROFESSIONAL SUMMARY

A passionate and self-motivated engineer seeking opportunities to apply knowledge and gain hands-on experience. The goal is to enhance technical skills and problem-solving abilities, embrace challenges, commit to continuous learning, and strive for excellence to drive both personal and professional growth.

## EMPLOYMENT EXPERIENCE

**Firmware Engineer (R & D), Dynamic Cranes Engineers Pvt, Ltd. Pune Sept. 2023 - Present**

Embedded C, Python

### Work Experience:

- Gained holistic exposure to crane safety devices, including design, development, and implementation.
- Specifically worked on Load Indicators and Safe Load Indicators (SLIs) for mobile cranes, **forklifts**, and **EOT (Electric Overhead Traveling) cranes** and many more cranes likewise.
- Played a key role in developing an **Anti-Collision Device for Tower Cranes**, enhancing safety and preventing accidents in multi-crane environments.
- Contributed to building and optimizing safety systems to ensure compliance with industry standards and improve operational efficiency.

## INTERNSHIPS

**Application Developer Intern, Qa Penguin Pvt, Ltd. Nagpur**

**Feb. 2023 – June. 2023**

Python, Web Development, IOT, Embedded C++, Database Management System

**Python Developer Intern, MasterSoft ERP Solutions Pvt, Ltd. Nagpur**

**Jan. 2023 - Feb. 2023**

Python, Artificial Intelligence, Machine Learning

## EDUCATION

**Yeshwantrao Chavan College of Engineering, Nagpur**

BE in ETC Engineering (overall CGPA - 7.4)

Feb, 2019 – May, 2023

**Major Hemant Jakate College, Nagpur**

Higher Secondary Certificate (HSC - Score - 59%)

June, 2018 – May, 2019

**Tejaswini Vidya Mandir, Nagpur**

Secondary School Certificate (SSC- Scored - 80%)

June, 2016 – May, 2017

## **TECHNICAL SKILLS**

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**Embedded System | Embedded C. & IOT | PLC | Database Management System**

**C| C++| Python Programming| HTML | CSS**

**Antenna Designs| Digital Image Analysis for Remote Sensing| Wireless Mobile Communication System**

## **PROJECTS**

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- **Lightning Protection**

- A Lightning Protector for cranes employs a Gas Discharge Tube using PCB circuits and sensors to safeguard against lightning strikes. Testing ensures its effectiveness in diverting harmful electrical surges, preserving crane equipment. Technology used Hardware, Embedded C and Python.

- **Major Project - Automatic Insect and Animal repellent in Farmlands**

- This is a technological and mechanical variation of a scarecrow, wherein any object that makes contact with the sensor undergoes objectification. The system employs sensors to detect the presence of objects and triggers a response. An ESP32 microcontroller is utilized to activate a buzzer, while IoT components transmit a notification to farmers via a Blink app, indicating a potential issue. The app provides accurate distance measurements and comprehensive information regarding the detected objects.

- **Minor Project - Touchless Door Bell, using Arduino - UNO**

- This concept presents a general and straightforward approach developed during the COVID-19 pandemic. The system comprises an Arduino Uno board, an ultrasonic sensor, and a buzzer. When an individual waves their hand in front of the sensor, the internal buzzer is activated, notifying the individual of the presence of someone outside. The project offers hygienic, convenient, energy-efficient, and potentially more secure alternatives to traditional doorbell systems.

- **Database Management System Project - Staff Management Application System**

- The Staff Management System application integrates a Database Management System to automate and optimize staff management processes within an organization.

- **E- Commerce Website using HTML, CSS & JavaScript**

- The E-Commerce Grocery shopping website, built using HTML and CSS, offers a user-friendly interface for browsing and purchasing groceries online, with features such as product categories, cart management, and secure checkout.

- **Python Projects - Snake game, Rock Paper Scissor, using Tkinter in Python**

## **CERTIFICATIONS AND COURSES**

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- Software Defined Networking - by University of Chicago offered through Coursera
- Introduction to Programming with MATLAB - by Vanderbilt University offered through Coursera
- PLC & CADA
- Embedded System & IOT
- Barclays Lifeskills Aptitude Program at GTT Foundation
- Introduction to EVs - Electric Vehicles

## **RESEARCH PAPER**

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### **Title: Automatic Insect and Bird Deterrent for Farmlands**

*Abstract*— Agricultural operations rely on the successful cultivation and harvest of crops in order to thrive and be profitable. However, birds and insects can pose a significant threat to crops, causing damage and reducing yield. Traditional methods of deterrents, such as visual and auditory scare tactics, can be unreliable and require constant maintenance. To address this issue, a new bird and insect deterrent system has been developed that utilizes ultrasonic sensors to accurately detect the presence of these pests. The system is designed as a rotating device that can cover a wide area, making it suitable for use in large farmlands. When a bird or insect is detected by the sensors, the device immediately stops rotating and activates a buzzer and laser for a brief period of time. The sound and flashing light serve as a deterrent, discouraging the pests from causing further damage to the crops

## **LANGUAGES**

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English | Hindi | Marathi | German

## **INTERESTS**

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Current Affairs | Travelling