

# HARSH KUMAR SINGH

Team Lead | MERN Stack | 5+ yrs Experience in Soft Dev

**Preferred Work Location:** Polhi NCR



Highly skilled Team Lead with a strong background in Node.js, MongoDB, and React.js. Proven track record of successfully leading teams to deliver complex projects. Adept at converting monolithic applications to microservices architecture, implementing multi-tenancy, and optimizing database performance. Experienced in Agile methodology and test-driven development.

## **SKILLS**

Core Skills: NodeJs, MongoDB, ReactJs, Javascript Tools: Git, JEST, ClickUp, AWS, SonarQube

## **EXPERIENCE**

## **Dhwani RIS:**

**Team Lead - Backend** (Aug'20 – Present)

- Strategic Leadership Led a team of ~10 engineers in building mForm, mGrant, with a success of 25+ clients.
- Architectural Transformation Successfully converted the company's core product mForm from Monolithic
  architecture to Microservices Architecture for 6 critical modules enhancing scalability and agility. Some include
  Role-based User Management, Dynamic Form & Dashboard builder, Monitoring Reports/Dashboards using
  Aggregation Pipelines etc.
- Implemented multi-tenancy seamlessly, expanding product capabilities, and facilitating data migration.
- Efficient Data Handling Leveraged **Kafka** for data pipelines, ensuring real-time event logging and streamlined **bulk data processing**.
- Code Quality Enhancement Elevated code quality through rigorous **code reviews**, resulting in a notable improvement in **SonarQube** grade from C to A.
- Built complex, high-performance, scalable solutions using Node.js, React, JavaScript, and MongoDB.
- DevOps Excellence Virtualized servers using Docker Containers for test environments, dev-environments, and Jenkins continuous integration.
- Created an in-house dashboard library with reusable components, resulting in a time-saving of 125+ dev. hours/month.
- Testing Culture Initiating and developing **Jest test cases** for the product from scratch.
- Agile Transformation Accountable for the overall SDLC process. Implementing agile methodology across the entire product team.
- Developed a **Data Synchronization** tool from **MongoDB to MySQL (50+ Lakh data)** from scratch for BI tool integration saving **30-40%** of development effort for custom projects..
- Cost Optimization Optimized DB, leading to significant cost savings of 55-60k monthly on production servers.

# Oxygen 2 Innovation:

Software Engineer

(Jan'19 – Jul'20)

- Introduced tools like **Git** (Version Control) & **ClickUp** (Project Management) in the organization's workflow.
- Led AI teams for 2 projects, aiding in efficient project deployment.
- Developed AdTracker, a tool for tracking 3 types of Advertisements(i.e FCT, Non-FCT, Branding) on live TV.
- Created a Situational Awareness System for real-time object detection integrated with **Army vehicles** to detect and alert them about 18 different suspicious activities which arise in different Riot situations.
- Worked on **IoT projects** including IECS for **Health Monitoring** and **Position Tracking of soldiers** and Smart Plug for educational purposes.
- Developed Backend APIs for IoT projects using NodeJS.
- Worked on various robotics projects, including ATVs, payload delivery drones, and AI-powered smart mirrors.
- Contributed to building a tool to calculate **drone flight time** based on parameters.
- Led and managed robotics-related activities and projects.

# Microcontroller Based Systems & Robotics Hub, JIIT Noida: Head Student Coordinator

(July'17- June'18)

- Delivered lectures on manual robotics, autonomous robotics, wireless communication, and IoT for college students.
- Managed internal and external affairs of the hub.
- Organized and managed a total of 14 events in annual cultural and technical fests of the college.

# **ACHIEVEMENTS & HONORS**

- Going Extra Mile Award (08/2022) Going extra mile in my daily deliverables and effectively building products for the organisation. Also, helped in team building activities.
- Demonstrated Robotics project to Directorate of General of CRPF (2020)
- Published Research Paper in IC3 Conference 2019 on the topic "A step towards Home Automation using IoT"
- 2<sup>nd</sup> Prize in Technocreed'15, and 3<sup>rd</sup> Prize in Impressions'16 (LFR), Techfest held at JIIT, Noida.
- **2**<sup>nd</sup> **Prize** in Manual Robotics 2015, held at SRM University
- **2**<sup>nd</sup> **Prize** in Technovoltz, during Techfest'15, held at IIT, Bombay.
- 1st Prize in Automation, during Cyber Srishti 2016, Techfest held at JIIT, Noida.

- 2<sup>nd</sup> Prize in Robocon, during ESYA'16, Techfest held at IIIT, Delhi.
- 2<sup>nd</sup> Prize in LFR, during Endeavour'17, Techfest held at KIET, Ghaziabad.
- **2**<sup>nd</sup> **Prize** in Project Exhibition during Cyber Srishti 2019, Techfest held at JIIT, Noida.
- College Ambassador in Techfest'16, a Techfest held at IIT, Bombay.

## PERSONAL PROFILE

**DOB:** 03-10-1997 **Languages Known:** English, Hindi **Hobbies:** Music, Badminton, Sudoku, Working on Challenging Projects

## **EDUCATION**

Degree	Discipline	Institute	
B. Tech.	Computer	Jaypee Institute of Information	
	Science	Technology	
Senior	CBSE	Delhi Public School	
Secondary			
High School	CBSE	Delhi Public School	

## **HOBBY PROJECTS**

- Booking Management System: MERN app to create/update/delete and manage bookings for a Banquet Hall.
- **Switch Simply**: An integrated home automation system that enables users to operate their appliances via a web app.
- **Event Registration**: Java-based portable app for managing events and registered participants.
- WhatsApp Chat Analyser: An app that visualizes the number of text messages sent by the user and time spent on WhatsApp.
- **Self-Balancing Bot**: A bot that balances itself on two wheels using a PID controller, nRF24L01+, MPU6050.
- Quadcopter: A quadcopter with a custom-made remote and flight controller using Arduino and MPU6050.
- Rescue Bot: A bot that senses and sends live footage from inside a collapsed building to the outside world.
- Alarobic Clock: An alarm clock that turns off only when the user does a particular exercise.
- Wireless Bot: A bot that can be controlled via the internet, a limited-range remote, or Bluetooth.
- Head Gesture Controlled Wheelchair: A wheelchair that can be controlled with head gestures.