



Agra

# HARSH KUMAR SINGH



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



/its-harsh

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Preferred Work Location: 📍 Delhi NCR



/itsharsh

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

Tools: Git, JEST, ClickUp, New Relic, AWS, SonarQube

## EXPERIENCE

### Dhwani RIS:

#### **Team Lead - Backend**

(Aug'20 – Present)

- Strategic Leadership - Led a team of **18 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 includes User Management, **Dynamic Form & Dashboard** builder, Monitoring Report 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.
- Developed 40+ Data Monitoring **Reports**, Custom **Dashboards**, **Aggregation Pipelines**.
- 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, IIIT 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 IIIT, 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.
- **1<sup>st</sup> Prize** in Automation, during Cyber Srishti 2016, Techfest held at IIIT, 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 IIIT, 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 Science	Jaypee Institute of Information Technology
Senior Secondary	CBSE	Delhi Public School
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.

