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HARSH KUMAR SINGH

Software Engineer | Web Developer | Robotics Engineer

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SKILLS

Areas of Interest:	Robotics, IoT, Web Development, Project & Team Management
Languages:	Node.js, React.js, Arduino(Embedded C), JavaFX, Python
Software Skills:	Git, HerokuApp, OpenCV, Image Processing, YOLOv3, Darknet
Hardware Skills:	Arduino, ESP8266, ESP32, nRF24L01+, LinkIt One, Raspberry Pi, Pixhawk
Database:	MySQL, H2, MongoDB

EXPERIENCE

Oxygen 2 Innovation: *Software Engineer*   (July'19 – June'20)
- Introduced tools like Git (Version Control) & ClickUp (Project Management) in the organization's workflow.
- AI - **Tech Lead** for 2 Projects helping the organisation to deploy their projects in an efficient and organised manner.
  - AdTracker - Tool to keep track of 3 types of Advertisements (i.e FCT, Non-FCT, Branding) running on live TV.
  - Situational Awareness System - Real-Time Object Detection tool integrated with Army Vehicle to detect and alert them about 18 different suspicious activities which arise in different Riot situations.
- IoT - IECS - An integrated system for Health Monitoring and Position Tracking of the soldier using Linkit One Board.
- IoT - Smart Plug - Designed Cost-Effective DIY Kit for School Students as to teach them about IoT using the MIT App Inventor, NodeMCU and Thingspeak's API.
- NodeJS - Developed Backend APIs for IoT Projects.

Oxygen 2 Innovation: *Robotics Engineer - Intern*   (Jan'19 – June'19)
- ATV - Pixhawk controlled ATV, Wireless Control with Autonomous Path Planning.
- Drones - Delivery of Payload (Smoke Grenades/Life Jackets), Surveillance, TIlt Rotor Tricopter.
- DFTC - Helped the mechanical team by building a tool to calculate Drone Flight Time based on various parameters.
- AI - Smart Mirror - DIY Kit for School Students to see weather info, time, date and Health status of their family persons along with their current location.

Microcontroller Based Systems & Robotics Hub, JIIT Noida: *Head Student Coordinator*   (July'17- June'18)
- Given lectures on manual, autonomous robotics, wireless communication, IoT for college students.
- Managed internal and external affairs.
- Successfully organized and managed a total of 14 events (2016-18) in annual cultural and technical fests of the college.

KEY PROJECTS

- **Switch Simply**: An integrated home automation system which helps the user to operate their appliances via the web app.
- **Event Registration**: Java Based Portable App for managing events and registered participants.
- **Booking Management System:** MERN App to create/update/delete and manage bookings of Banquette Hall.
- **WhatsApp Chat Analyser**: App that visualises the no of text messages sent by the user, & time spent on Whatsapp.
- **Self-Balancing Bot**: Bot balancing itself on two wheels using PID controller, nRF24L01+, MPU6050.
- **Quadcopter**: Quadcopter with custom made remote and flight controller using Arduino and MPU6050.
- **Rescue Bot**: Bot that senses and send live footage from inside a collapsed building to the outside world.
- **Alarobic Clock**: A alarm clock that turns off only when doing a particular exercise.
- **Wireless Bot**: Bot that can be controlled via the internet, limited ranged remote, or Bluetooth.
- **Head Gesture Controlled Wheelchair**: A wheelchair that can be controlled with head gestures.

ACHIEVEMENTS & HONORS

- Published **Research Paper** in **IC3 Conference 2019** on the topic **"A step towards Home Automation using IoT"**
- **2nd Prize** in Technocreed'15, and **3rd Prize** in Impressions'16 (LFR), Techfest held at JIIT, Noida.
- **2nd Prize** in Manual Robotics 2015, held at SRM University
- **2nd Prize** in Technovoltz, during Techfest'15, held at IIT, Bombay.
- **1st Prize** in Automation, during Cyber Srishti 2016, Techfest held at JIIT, Noida.
- **2nd Prize** in Robocon, during ESYA'16, Techfest held at IIIT, Delhi.
- **2nd Prize** in LFR, during Endeavour'17, Techfest held at KIET, Ghaziabad.
- **2nd Prize** in Project Exhibition during Cyber Srishti 2019, Techfest held at JIIT, Noida.
- College Ambassador in Techfest'16, a Techfest held at IIT, Bombay.

EDUCATION

Degree	Discipline	Institute	Location	Year	CGPA/%
B. Tech.	Computer Science	Jaypee Institute of Information Technology	Sec 62, Noida	2019	5.7 (7.7 8th Sem)
Senior Secondary	CBSE	Delhi Public School	Agra	2015	91.6%
High School	CBSE	Delhi Public School	Agra	2013	9.0

PERSONAL PROFILE

DOB: 03-10-1997   **Languages Known:** English, Hindi
Preferred Location: 📍 Delhi NCR   **Hobbies:** Listening Music, Sports, Working on Challenging Projects