

# Ayush Kumar

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## SKILLS

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- **Languages:** C++, JavaScript, C, PHP
  - **Frameworks:** HTML and CSS, Bootstrap, NodeJS, React
  - **Tools/Platforms:** MySQL, MongoDB
  - **Soft Skills:** Problem-Solving Skills, Team Player, Project Management, Adaptability
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## PROJECT

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### AI-Driven Real-Time Traffic Management [Github](#)

Apr' 25

- Built an intelligent real-time traffic monitoring system using advanced computer vision models and embedded sensors to detect traffic rule violations instantly.
- Implemented automated alert generation where offenders receive instant notifications upon breaking rules, ensuring quick corrective action.
- Integrated AI-enabled high-beam detection and automatic dimming control for vehicles in specific city zones, significantly improving night-time road safety and reducing glare.
- Developed a personalized educational video pipeline using AI/ML to generate short, context-aware correct driving behavior" clips for each type of violation detected.
- Tech stack: Python, OpenCV, Machine Learning, Computer Vision, Embedded Systems, Real-Time Processing, Sensors, AI Video Generation

### Arduino-Based Temperature & Humidity Monitor [Github](#)

Dec' 23

- Developed a real-time environmental monitoring system using Arduino UNO and the DHT22 sensor to capture precise temperature and humidity readings.
- Implemented reliable data acquisition and displayed continuous live sensor output through the Arduino Serial Monitor for easy observation.
- Ensured stable hardware-software integration by calibrating sensor responses and maintaining consistent microcontroller communication.
- Optimized the setup for accurate measurements, low latency, and smooth real-time data updates during extended operation.
- Tech stack: Arduino UNO, DHT22 Sensor, C/C++ (Arduino IDE), Serial Communication, Embedded Systems

## CERTIFICATES

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- Social Networks NPTEL | IIT Madras | [Link](#)
- ChatGPT-4 Prompt Engineering: ChatGPT | GenerativeAI&LLM Infosys| [Link](#)
- Computational Theory: Language Principle & Finite Automata Theory| Infosys| [Link](#)
- Digital Marketing| Cursa| [Link](#)

## ACHIEVEMENTS

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- Secured 10th position in the Echo Hackathon, competing among 300+ teams Completed. Mar' 25
- 5+ professional certifications on Coursera in technology & skill development. Mar' 25
- Participated in a 36-hour hackathon, solving real-world problems through teamwork and time management. Aug' 24

## EDUCATION

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- **Lovely Professional University** Phagwara, Punjab  
*Bachelor of Technology - Computer Science and Engineering; CGPA: 5.44* August 2023 - Present
- **St Joseph Public School** Begusarai, Bihar  
*Intermediate; Percentage: 74%* April 2021 - March 2023
- **St Joseph Public School** Begusarai, Bihar  
*Matriculation; Percentage: 70%* April 2019 - March 2021