HARSH ARORA

(+91)937-258-5511| harsharora.work@gmail.com | Github | Linkedin

Software Developer with 3+ years of experience in Full Stack Development, Machine Learning, and IoT Systems. Expertise in Python, JavaScript, React, Node.js, TensorFlow, and cloud technologies. Proven track record in enterprise AI solutions, web application development, and blockchain implementation.

EDUCATION

Bachelor of Technology in Computer Science Engineering SRMIST, Kattankulathur 2023 - 2027 **Relevant Coursework**: Data Structures and Algorithms, Object Oriented Programming, Database Management Systems, Software Engineering, Machine Learning, Web Development, Mobile Application Development, Cloud Computing

TECHNICAL SKILLS

Programming Languages	Python, Java, JavaScript, C++, C, HTML5, CSS3, SQL, PHP, Rust, Go
Web Development	React.js, Next.js, Node.js, Express.js, RESTful API, JSON, AJAX, Bootstrap, jQuery
Database	MySQL, PostgreSQL, MongoDB, SQL Server, Vector Databases, Redis Cloud
DevOps	AWS, Google Cloud Platform, Docker, Kubernetes, Git, GitHub, CI/CD, Linux
Machine Learning	TensorFlow, PyTorch, OpenCV, Scikit-learn, Pandas, NumPy, Matplotlib
Blockchain	Ethereum, Solidity, Smart Contracts, Web3, MetaMask, IPFS, Polygon IoT
Embedded	ESP8266, Raspberry Pi, Arduino, Sensor Integration, MQTT, Embedded C Software
Development	Agile Methodology, SDLC, API Development, Microservices, Version Control, Unit Testing

PROFESSIONAL EXPERIENCE

Research Intern - AI/ML Engineer RNTBCI Renault Nissan Technology and Business Centre India February 2025 - April 2025

- Developed machine learning models for predictive maintenance and anomaly detection in manufacturing systems
- Implemented computer vision solutions using TensorFlow and OpenCV for industrial defect detection with 92% accuracy
- Created AI powered HMI interfaces and Android applications for gesture-controlled machine interaction
- Collaborated with cross functional teams using Agile development methodologies for industrial AI deployment
- Processed and analyzed datasets containing 10000+ frames for training deep learning models
- Built end to end machine learning pipelines for real time industrial automation

Software Developer Intern - Reliance Industries Limited June 2025 - July 2025

- Built enterprise grade Retrieval Augmented Generation RAG chatbot with scalable multi node architecture
- Developed natural language processing pipelines for SQL query generation and database interaction
- Implemented vector database solutions for context aware conversational AI and multi session memory
- Optimized data retrieval and processing systems for improved user experience and decision making
- Integrated multiple data sources and APIs for comprehensive enterprise analytics platform

CTO - Thinking Beyond February 2024 - March 2025

- Automated business processes using Python scripting improving operational efficiency by 60%
- Developed responsive web applications and e learning platforms with enhanced user interface design
- Implemented feedback systems and progress tracking features to increase user engagement and retention
- Created custom automation tools for student intake form processing and submission filtering

PROJECTS

Blockchain Healthcare Management System - January 2025 - March 2025

- Developed smart contracts on Ethereum and Polygon networks for secure medical data management
- Implemented AES 256 encryption and IPFS integration for decentralized storage and data privacy
- Created Web3 integration with MetaMask wallet connectivity and gas fee optimization
- Built patient controlled access system for medical records using blockchain technology

Financial Analytics Platform - June 2025

- Built full stack application using React.js Next.js and Google Gemini AI for real time stock analysis
- Integrated multiple APIs including Yahoo Finance and NewsAPI for live market data and sentiment analysis
- Implemented JWT authentication portfolio management and interactive data visualization with Chart.js
- Created automated buy sell recommendation system based on AI analysis and user portfolio

IoT Smart Classroom System - October 2024

- Designed intelligent lighting automation using ESP8266 microcontroller and computer vision
- Developed real time human presence detection system with zone based control algorithms
- Implemented energy optimization through IoT protocols and embedded system programming
- Created persistent coordinate system for accurate zone mapping and reduced false positives

Enterprise Meeting Portal - January 2025 - March 2025

- Developed custom PHP based web application for internal organizational communication
- Implemented database design and server side scripting for dynamic content management
- Created user authentication and role based access control system
- Built responsive interface for cross platform compatibility

CERTIFICATIONS

- Google Cybersecurity Professional Certificate, Google, November 2023 - June 2024
- IBM Introduction to Artificial Intelligence, IBM, March 2024 - April 2024
- Python Programming Specialization, University of Pennsylvania, October 2023 - November 2023