HEMA S

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HemaSuthakar (Hema)

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ABOUT ME

Aspiring Security Researcher with certifications in cybersecurity and hands-on experience in system resilience, AI-driven detection, and compliance workflows. Skilled in bridging technical development with analytical security research, leveraging expertise in Python, SQL, and cloud infrastructure to investigate vulnerabilities and strengthen system defenses. Experienced in applying AI/ML to real-world risk scenarios, publishing research, and translating complex security concepts into actionable solutions.

EDUCATION

Bachelor of Technology (B.Tech) in Information Technology

M. Kumarasamy College of Engineering, Karur (2023 – 2027)

CGPA: 8.1 / 10

Higher Secondary Certificate (HSC)

Saraswathi Matric Higher Secondary School

PERCENTAGE: 88.88%

INTERESTED DOMAIN

Full-Stack Development

Web Engineering

UX Engineering

Cybersecurity & Analysis

Data & Marketing Analytics

EXPERIENCE

Full Stack Developer   *2025– 2026*

Technology Innovation Hub-MKCE l Karur

- Built and maintained web applications using React.js, Node.js, and MongoDB.
- Developed and integrated RESTful APIs for scalable backend solutions.
- Applied Git workflows to ensure clean, collaborative version control.
- Troubleshot code errors and optimized performance for reliability.

PROJECTS

Blood Donation System (BDS)

- **Domain/Stack:** HTML, CSS, JavaScript | Backend: PHP, MySQL
- **Description**: Designed and developed a responsive web-based platform that connects blood donors with recipients. Implemented user registration, donor availability, and request management modules to improve accessibility and awareness.
- **GitHub**: https://github.com/HemaSuthakar/BDS

Vehicle Accident Detection

- **Domain/Stack**: Python, Machine Learning,Mobile App
- **Description:** Implemented a detection system to identify and classify accident scenarios using ML algorithms. Focused on real-time data handling and alert mechanisms.
- **GitHub:** https://github.com/HemaSuthakar/Vechicle-Accident-Detection

Disaster Simulation

- **Domain/Stack:** Python, Simulation Frameworks
- **Description:** Developed a simulation model to analyze disaster scenarios and response strategies. Focused on predictive modeling and visualization of outcomes.
- **GitHub:** https://github.com/HemaSuthakar/Disaster-Simulation

INTERNSHIP

MERN Stack Developer Intern

Codec Technologies Pvt. Ltd., Bangalore, IndiaDuration: 20 Oct 2025 – 20 Nov 2025 (1 Month, AICTE & ICAC Approved)

- Developed and maintained web applications using MongoDB, Express.js, React.js, and Node.js.
- Implemented responsive UI components and optimized backend APIs for performance.
- Collaborated with team members to follow best practices in Git version control and project hygiene.
- Gained exposure to full-stack development workflows and industry-standard coding practices.

INPLANT TRAINING

Data Analyst Trainee

easyQ Solutions & Technologies Pvt. Ltd., Bangalore, India
Duration: 24 Dec 2024 – 31 Dec 2024

- Completed inplant training focused on data analysis fundamentals, compliance workflows, and organizational data handling.
- Gained exposure to real-world analytics processes and industry practices.
- Demonstrated punctuality, discipline, and adaptability in a professional environment.

TECH STACK

- **Web Development:** React.js, Node.js, Express.js (MERN Stack Developer Intern), HTML5, CSS3 (HackerRank Basic), WordPress, Human-Computer Interaction (Elite Silver Medalist).
- **Artificial Intelligence:** Oracle Generative AI (Certified Professional), AI Vector Search (Certified Professional), Prompt Engineering, OCI AI Foundations.
- **Cloud & DevOps:** Oracle Cloud Infrastructure (Certified Associate), Cloud Computing (NPTEL Elite), Git/GitHub.
- **Database:** MongoDB (MERN Stack architecture), SQL, AI Vector Search (Advanced Data Retrieval).

Airline Reservation System

- **Domain/Stack**: Python, Tkinter | Backend: SQLite
- **Description:** Created a desktop-based flight booking application with real-time seat selection and passenger management. Designed a clean graphical interface and optimized database connectivity.
- **GitHub:** https://github.com/HemaSuthakar/Airline-Reservation-System

CERTIFICATIONS

Oracle Cloud Infrastructure (OCI)

- Certified Generative AI Professional (2025)
- AI Vector Search Certified Professional
- Certified AI Foundations Associate (2025)
- Certified Foundations Associate (2025)

NPTEL – IIT Certifications (Elite Status)

- Introduction to Internet of Things | IIT Kharagpur | Elite + Silver (Score: 86%) | Jan – Apr 2025
- Human-Computer Interaction (English) | IIT Madras | Elite + Silver (Score: 85%) | Jan – Apr 2025
- Introduction to Industry 4.0 and Industrial IoT | IIT Kharagpur | Elite (Score: 71%) | Jul – Oct 2024
- Cloud Computing | IIT Kharagpur | Elite (Score: 62%) | Jul – Oct 2025

Specialized Technical & Business Training

- Security Analyst Certificate Programme | Reliance Foundation Skilling Academy | 120 Hours | Oct 2025
- SOAR - AI to be Aware | HCLTech (NCVET Recognized) | Oct 2025
- CSS (Basic) | HackerRank | May 2025 | ID: 74628CE6CBF1
- Build a Free Website with WordPress | Coursera Project Network | Oct 2025
- Human Resources Analytics | University of California, Irvine (via Coursera) | Dec 2023
- The Fundamentals of Digital Marketing | Google Digital Unlocked | Jun 2022
- Google Analytics Individual Qualification | Google Digital Academy

PUBLICATIONS

Hema S., et al., **"Multi-Sensor Smartphone-based Vehicle Accident Detection and Emergency Reporting System using Voice-Assisted Validation"** 2026 5th International Conference on Communication, Computing and Electronics Systems (ICCCES), IEEE, Coimbatore, India, 2026. (Paper ID: ICCCES-909).

- **Core Contribution:** Engineered an AI-driven optimization model that improved the accuracy by 92%.
- **Implementation**: Architected and deployed a cross-platform mobile application to deliver real-time AI insights to end-users, ensuring a seamless UX/UI transition from research to production.