

# SK ARIF AHMED

Mobile: 8371801715

GitHub: github.com/Arif1258

Email: skarifahmedofficial@gmail.com LinkedIn: www.linkedin.com/in/skarifahmed/

## SUMMARY

Full-stack software engineer dedicated to building scalable systems and intelligent solutions. Experienced in leveraging secure authentication mechanisms, database optimization, and emerging technologies. Committed to delivering robust, user-centric applications through clean code, performance optimization, and advanced system design principles while advancing innovative technology practices.

## EXPERIENCE

**Software Development Intern** – Department of CSE, Adamas University May 2025 – Jan 2026

- Built a PhD Progress Tracker System to manage doctoral students' milestones, automating progress notifications.
- Developed PBAS (Performance-Based Appraisal System) to streamline faculty evaluation, reducing manual work.
- Implemented role-based access control and interactive dashboards, improving usability for 25+ faculty members.

**Cybersecurity Research Intern** – University College Cork (UCC), Ireland Jun 2025 – Sep 2025

- Developed a Flask web application for DICOM medical image viewing and processing data with secure upload and visualization features.
- Implemented AES-256 encryption with randomization techniques (random IVs, salts, padding) to prevent side-channel attacks and protects sensitive patient data during storage and transmission.
- Conducted security testing to identify timing-based vulnerabilities, implementing countermeasures including constant-time operations and random delays to prevent key-recovery attacks.

**Software Development Intern** – KATSI Canada, Toronto Aug 2024 – Apr 2025

- Co-developed an OFAC List Checking Web App using PHP & MySQL, improving compliance checking speed.
- Created system diagrams using Visual Paradigm and Figma for accurate project planning as per system flow.

## SKILLS

- **Languages:** Java, JavaScript, Python, PHP, SQL
- **Frontend:** HTML5, CSS3, JavaScript (ES6+), React, React Native, Tailwind CSS
- **Backend:** Node.js, Express.js, RESTful APIs, Jest
- **Databases:** SQL, MongoDB, Redis
- **DevOps & Cloud:** Docker, Kubernetes, AWS EC2, Jenkins, GitHub Actions, Prometheus, Grafana, Loki
- **Tools & Integrations:** Git, GitHub
- **Operating Systems:** Linux

## PROJECTS

**Buyora** — Full Stack E-Commerce Platform | MERN, Docker, Redis, Prometheus, Grafana, Stripe

- Containerized backend, frontend, Redis, and Nginx services with Docker and deployed them on Kubernetes using Deployments, Services, and Ingress for scalable runtime management.
- Configured Nginx Ingress for traffic routing and load balancing across multiple backend pods under concurrent user load.
- Integrated Redis for cart and session caching to reduce database load and stabilize response latency during traffic spikes.
- Implemented full observability using Prometheus metrics and Grafana dashboards to track request latency, error rates, pod health, and resource utilization.

**SigmaGPT** — AI SaaS Chat Platform | MERN, Docker, OpenAI/Gemini

- Containerized frontend and backend services using Docker to guarantee consistent runtime environments across development and deployment.
- Implemented JWT-based authentication and Stripe-backed subscription and credit management with server-side verification.
- Integrated Gemini API for real-time AI chat with controlled request handling and API failure safeguards.
- Structured backend services with environment-based configuration and health endpoints to ensure reliable container startup.

**SpaceCall** — Real-Time Video Calling Platform | MERN, WebRTC, Socket.io

- Deployed the signaling server and frontend in Docker containers to ensure reproducible real-time communication environments.
- Engineered a Socket.io-based signaling layer to establish and manage peer-to-peer WebRTC connections for multi-user video rooms.
- Implemented secure authentication using bcrypt-hashed credentials and token-based session management.
- Built resiliency into real-time communication by handling peer disconnects, reconnect events, and session cleanup on connection drops.

## ACHIEVEMENTS

- Winner — Vishwakarma Awards, IIT Hyderabad (National-Level Innovation Competition)
- 1st Place — Anveshan AIU 2025 (Zonal — East); Advanced to International Round
- Selected for Incubation — CRTDH, IIT Kharagpur

## EDUCATION

- **Secondary Education** - Egra Public School (Board: ICSE, 2010-2020)
- **Higher Secondary Education** - Mount Litera Zee School (Board: CBSE, 2020-2022)
- **B.Tech in Computer Science Engineering** - Adamas University (NAAC: A, 2022-2026)