

USHAN PERERA

Phone: +94 711 742 319

Email: samudithaperera01@gmail.com

LinkedIn: linkedin.com/in/ushan-perera-16ab952b3

GitHub: github.com/ushansamudithaperera

Location: Rathnapura, Sri Lanka

PROFESSIONAL SUMMARY

BSc (Hons) in Electronics and Computer Science undergraduate with hands-on experience building real-time secure networks and AI-integrated platforms. Seeking a technical internship to utilize expertise in software engineering, API development, AI & ML and DevOps practices within a fast-paced technology environment.

EDUCATION

BSc (Hons) in Electronic and Computer Science Jun 2023 - Present

University of Kelaniya | Expected Graduation: 2027

G.C.E. Advanced Level Examination - Physical Science Stream Feb 2022

Passed with eligibility for university entrance

TECHNICAL SKILLS

Programming Languages: JavaScript, TypeScript, Python, Java, C, C++, C#, PHP

Frontend Technologies: React.js, HTML5, CSS3, Tailwind CSS, Bootstrap

Backend Technologies & Frameworks: Node.js, Express.js, Spring Boot, .NET, REST APIs

Databases: MongoDB, MySQL, Oracle, SQL Server

Cloud, DevOps & Infrastructure: AWS, Docker, Kubernetes, Linux, CI/CD, Prometheus, Grafana

Developer Tools & IDEs: Git, GitHub, VS Code, IntelliJ IDEA, Android Studio, Postman, XAMPP

PROJECTS

Sentinel Stream - Real-Time Intrusion Detection System 2026

Tech: React.js, Node.js, Express.js, MongoDB Atlas, Socket.IO, Docker

- Designed a full-stack intrusion detection system with multi-layer detection mechanisms (volumetric, pattern-based, Z-score, and EWMA) to identify anomalous network behavior in real time.
- Built an adaptive feedback system enabling analysts to adjust detection sensitivity through alert classification without requiring model retraining.
- Secured the application with JWT authentication, HTTP-only cookies, and Role-Based Access Control (RBAC); deployed the full infrastructure using Docker containerization.

AI-Powered Smart Inventory System 2026

Tech: MERN Stack, Docker, Redis, Prometheus, Grafana, Google Gemini AI

- Integrated Google Gemini AI into a scalable inventory platform to automate product identification, categorization, and predictive sales forecasting.
- Implemented monitoring and observability using Prometheus and Grafana to track system performance and business metrics.
- Improved backend data retrieval speeds through Redis caching and MongoDB aggregation pipelines; automated test workflows via GitHub Actions CI/CD.

Travel Commerce Platform | Group Project 2025

Tech: React.js, Spring Boot, MongoDB, REST APIs

- Developed a full-stack digital marketplace connecting travelers with local service providers via a responsive React.js frontend.
- Built secure RESTful APIs with Spring Boot and optimized MongoDB queries, improving dynamic data retrieval efficiency.

EDU QUIZ - Quiz Management System | Group Project 2025

Tech: C#, .NET Framework, Windows Forms, SQL Server

- Developed a desktop application supporting automated quiz evaluation and real-time result generation.
- Architected a centralized SQL Server database with role-based access control to manage multi-tier permissions for teachers and students.

Happy Paws Veterinary Clinic System | Group Project 2025

Tech: PHP, MySQL, JavaScript, HTML5, CSS3, XAMPP

- Built a full-stack clinic management platform supporting appointment scheduling, patient workflows, and pet adoption services.
- Implemented SQL prepared statements across all user input fields, eliminating SQL injection vulnerabilities.

CERTIFICATIONS

- **AWS Cloud Practitioner Essentials** - Amazon Web Services Apr 2026
- **Kubernetes for the Absolute Beginners with Hands-on Labs** - KodeKloud Mar 2026
- **Docker Training Course for the Absolute Beginner** - KodeKloud Mar 2026
- **Hands-on Introduction to Linux Commands and Shell Scripting** - IBM Mar 2026
- **Developing Back-End Apps with Node.js and Express** - IBM Mar 2026
- **Introduction to Information Security** - HashX Mar 2026

EXTRACURRICULAR ACTIVITIES

Membership Coordinator - UOK Robot Battles Mar 2025 - Aug 2025

- Communicated competition details and updates to registered members through emails and phone calls.
- Provided support to fellow membership coordinators in managing participant engagement activities.
- Assisted the organizing committee in ensuring effective coordination of membership-related operations.

Member - Electronics and Computer Science Club (ECSC) Jun 2023 - Present

- Contributed to organizing and executing major technical events, boosting student engagement in modern computing and software engineering.