

# **Rusith Fernando**

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• Home: 131A, Nakele Katuneriya, 61180 Katuneriya (Sri Lanka)

## **CAREER OBJECTIVE**

A highly motivated and detail-oriented Software Engineering graduate from Sri Lanka Institute of Information Technology (SLIIT). I am seeking opportunities to apply and expand my skills in full-stack development, Al integration, and IoT-enabled systems. I am passionate about solving real-world challenges through inclusive, intelligent, and accessible technologies.

#### **WORK EXPERIENCE**

# **OXZON AI** – Northampton, United Kingdom

City: Northampton | Country: United Kingdom

## **Software Engineer Intern (Remote)**

[ 07/10/2024 - 07/04/2025 ]

- Built full-stack web applications for e-commerce projects
- Created responsive UIs using React.js
- Developed secure REST APIs with Node.js
- Implemented real-time features and user authentication with Firebase
- Participated in Agile workflows (stand-ups, sprints, code reviews)
- Collaborated with a global remote team using Git for version control.

### **EDUCATION AND TRAINING**

# BSc (Hons) in Information Technology - Specialising in Software Engineering

**Sri Lanka Institute of Information Technology (SLIIT) - (GPA - 2.87/4.00)** [ 01/06/2021 - 01/07/2025 ]

City: Malabe | Country: Sri Lanka | Website: https://www.sliit.lk | Level in EQF: EQF level 7

### G.C.E. Advanced Level Examination - Mathematics Stream

St. Joseph Vaz College, Wennappuwa [ 2017 – 2019 ]

City: Wennappuwa | Country: Sri Lanka | Website: https://www.josephvazcollege.lk/ | Level in EQF: EQF level 4

Subjects: Combined Mathematics (B), Chemistry (C), Physics (S)

## **G.C.E. Ordinary Level Examination**

St. Joseph Vaz College, Wennappuwa [ 2015 – 2016 ]

City: Wennappuwa | Country: Sri Lanka | Website: https://www.josephvazcollege.lk | Level in EQF: EQF level 2

9 A's including Mathematics, English, Science, and ICT

### **LANGUAGE SKILLS**

Mother tongue(s): Sinhala

## Other language(s):

## **English**

LISTENING B2 READING C1 WRITING C1

#### **SPOKEN PRODUCTION B1 SPOKEN INTERACTION B1**

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

#### **SKILLS**

JavaScript / Python (computer programming) / Java (computer programming) / Programming Languages: C++, Kotlin, Java, Python.

#### **Communication Skills**

Team collaboration in Agile environments / Written and oral communication in technical documentation / Cross-cultural and remote team communication

## **Organisational / Managerial Skills**

Project management in academic and freelance settings / Time management under strict deadlines / Task prioritization and sprint planning

## **Research and Learning Skills**

Academic research and report writing / Quick learner, self-motivated for new technologies / Experience presenting at international conferences

#### **Creative & Soft Skills**

Critical thinking / Creative problem-solving / Emotional intelligence / Multitasking and stress management / Innovatio n in user-friendly system design

## **Digital Skills**

Programming Languages: JavaScript, Python, Java, Kotlin, PHP, TypeScript, HTML/CSS / Frameworks & Libraries: React.js, Node.js, Express.js, Laravel / Databases: MongoDB, MySQL, Firebase, PostgreSQL / Mobile App Development: Android (Kotlin) / Cloud & DevOps: Firebase Hosting & Realtime DB, Docker / Version Control: Git (GitHub) / Postman, IIS, Agile (SCRUM, KANBAN), DI Fwks, JIRA, SonarCube / Figma Design / AI & ML: TensorFlow, Scikit-learn / IoT Integration: Arduino-based sensors and microcontrollers

## FINAL-YEAR RESEARCH PROJECT

## Real-Time Vehicle Horn Detection and Alert System for Deaf Drivers Using ML and IoT

- Used Arduino, MEMS microphones, and TDOA for sound localization.
- Developed ML models using Scikit-learn.
- Delivered real-time alerts via mobile app (visual + haptic).
- Accepted for presentation at ICCCNT 2025, ICOICT, ITSC, and ICSECS.

## **OTHER ACADEMIC PROJECTS**

## **Other Academic Projects**

- 1. Online Clothing Store (MERN Stack) Managed deliveries, assigned drivers, tracked orders, generated reports.
- 2. Online Medicine Ordering System (Java + MySQL) Handled full CRUD operations, billing, and delivery logic.
- **3. Hotel Reservation System (PHP + MySQL)** Built booking system with event offers, CRUD operations, and admin dashboard.
- **4. Self-Employee Management App (Kotlin + Firebase)** Developed task creation, tracking, and update features for freelancers.
- **5. Drama Booking App (Flutter + SQLite + Provider)** Built cross-platform mobile app with user authentication, seat selection, booking system, and admin dashboard. Implemented local database, fake API simulation, role-based access, and Material Design UI.
- **6. Clean Go App (Kotlin + Firebase)** Built on-demand cleaning service app with dual-role system for customers and service providers. Features booking management, payment form validation, bidirectional ratings, and real-time job tracking using Firebase Realtime Database and MVVM architecture.
- **7. CTSE Lecture Notes Chatbot** Developed a RAG chatbot using LangChain, Ollama, and Streamlit. Dual UI (Jupyter/ Streamlit), powered by Gemma:2b LLM and FAISS. Integrated Tesseract OCR, enabled smart chunking, strict relevance filtering, and lecture-specific Q&A.
- **8. Smart Waste Management System (Flutter + Laravel + FastAPI + TensorFlow) [Ongoing] -** Developing a full-stack waste reporting app with Al-powered image classification. Features include Flutter mobile app with camera and GPS integration, Laravel REST API with Sanctum authentication, FastAPI ML service using MobileNetV2 for 5-category waste classification, MySQL database, Docker containerization, and an admin dashboard for waste management authorities.
- **9. HearTogether Matrimony App (Flutter + Firebase UI)** Developed frontend UI for inclusive dating platform targeting hearing-impaired community with accessibility-focused design (STT/TTS integration points, haptic feedback), responsive layouts, and admin dashboard interface. Features multilingual support (Sinhala/Tamil/English) and modern Material 3 design system.
- **10. Silent Space Accessibility App (Flutter + Dart) [Ongoing]** Developing an accessibility-first app for deaf/hard-of-hearing users with Al sound detection, visual/haptic alerts, and customizable feedback. Built with Provider, Go Router, shared preferences, and modern UI/UX design.
- **11. Coconut Shell Collection & Reuse Platform (Flutter + Firebase)** Designed and developed a mobile marketplace for Sri Lankan households and villagers to sell coconut shells, while enabling collectors and industries to trade, reuse, and recycle them. Integrated Google Maps for pickups, route optimization, real-time notifications, payment systems, and multi-role dashboards (household, collector, buyer).

### **EXTRACURRICULAR ACTIVITIES**

- Member Chess Club, SLIIT
- School Badminton Club St. Joseph Vaz College
- Innovation Club St. Joseph Vaz College

### **REFERENCES**

## Dr. Kapila Dissanayaka

Senior Lecturer (Higher Grade)

Faculty of Computing | Computer Science

Sri Lanka Institute of Information Technology (SLIIT)

E-mail: kapila.d@sliit.lk

# Ms. Poojani Gunathilake

Assistant Lecturer

Faculty of Computing | Software Engineering

Sri Lanka Institute of Information Technology (SLIIT)

E-mail: poojani.g@sliit.lk

I do hereby certify the above information is true and accurate to the best of my knowledge.

25/09/2025

Rusith Fernando

JRP Lil: