Akash Fernando
COMPUTER ENGINEERING UNDERGRADUATE

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Profile

Computer Engineering undergraduate at the University of Peradeniya with hands-on experience in full-stack development, mobile applications, and backend API engineering. Adaptable and driven, I enjoy learning new technologies and solving technical challenges in collaborative environments. Experienced in building scalable systems. I aim to continuously grow my skills while contributing effectively to impactful software projects.

Education

University of Peradeniya	**2022 - Present**
BSc.Eng(Hons.) Specializing in Computer Engineering	*cGPA : 3.65/4.00*
Mahanama College, Colombo 03	**2012 - 2020**
G.C.E. Advanced Level Examination	*3As(Z score -2.039)*

Skills

Programming: JavaScript, Java, Python, C
Frameworks: React,Flutter, Node.js, Spring Boot
Databases: MySQL,Firebase, PostgreSQL, MongoDB,
Tools: Git, Postman, Android Studio,Git, Thunder Client, VS Code
Concepts: OOP, Data Structures, Networking, REST APIs

Projects

1.CourierX — Full-Stack Courier Service Platform - Individual | 🎧 Repo

○ Developed a secure role-based courier management system with JWT authentication and RESTful APIs.
○ Integrated React frontend with Spring Boot backend using Axios interceptors and CORS-enabled security configuration.
○ Implemented Admin, User, and Agent workflows using Spring Boot, REST APIs, and PostgreSQL with repository-based data access.
○ **Technologies:** Spring Boot, React, JWT, PostgreSQL, REST APIs

2.**Enhancing Automated Evaluation in VR Nursing (ongoing) - Group** | 🎧 Repo

○ Designing a VR-based intelligent nursing education system simulating wound-care procedures with explainable feedback.
○ Implementing multi-agent **LLM evaluation architecture** using Retrieval-Augmented Generation (RAG) to reduce hallucinations.
○ Current contribution backend development including Firestore scenario management, evaluator schemas, prompt templates, and LLM pipeline integration.
○ **Technologies:** Python, FastAPI, Firebase Firestore, OpenAI Vector Store, RAG, Pydantic, REST APIs

3.BookWallet — Social Book Review Tracking Platform - Group | 🎧 Repo

○ Developed a full-stack book review and tracking application enabling users to review, rate, and manage reading activity.
○ Built RESTful APIs using Node.js and Express with MySQL integration for handling books, reviews, likes, follows, and comments.

- Implemented a Flutter frontend featuring user profiles, follow/unfollow functionality, interactive review feeds, and state-managed UI components.
- Designed relational database schemas and backend services supporting ISBN-based book identification, automatic timestamp handling, and scalable review management.
- **Technologies:** Node.js, Express, MySQL, Flutter, REST APIs

4.Robot Waiter — Autonomous Restaurant Service Robot - Group | 🎧 Repo

- Developed an autonomous robotic system capable of navigating restaurant environments and delivering orders to tables.
- Implemented sensor-based obstacle detection and path planning using embedded programming and real-time control logic.
- Integrated hardware components including microcontrollers, motors, and ultrasonic sensors for movement and collision avoidance.
- Designed communication workflow between user interface and robot controller for order handling and task execution.
- **Technologies:** AWS (IoT Core, EC2), MQTT, Python, Raspberry Pi, React, OpenCV

Experience

1. Instructing   2024–Present
Worked as a Casual Instructor at the University of Peradeniya.

2. Coders Competition — Organizing Committee   2024
Served as a member of the organizing committee for the Coders Competition conducted at the University of Peradeniya.

3. EngEx – 75th Anniversary Celebration Exhibition   2025
Served as a member of the organizing team and presented my third-year undergraduate research project at the University of Peradeniya Engineering Exhibition (**EngEx**).

Certificates

Udemy — Angela Yu
The Complete Full-Stack Web Development Bootcamp (68 hours)   *2024*

DP Education
React Development Course (50 hours)   *2025*

Extra-Curricular Activities

Member - Association of Computer Engineering Students - University Of Peradeniya	2023 - 2025
Member - AeroGenz club of University of Peradeniya	2024 - 2025
Member - SEDS Pera of University of Peradeniya	2024 - 2026

Languages

- Sinhala (Native)
- English

Strengths

- Adaptability
- Collaboration
- Initiative

References

Dr. Upul Jayasinghe
Senior Lecturer — Dept of CE
University of Peradeniya
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Mrs. Yashodha Vimukthi
Lecturer — Dept of CE
University of Peradeniya
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