

# Shaveen Udayanga

Sri Lanka

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## EDUCATION

### University of Sri Jayewardenepura

BSc (Hons) in Computer Science, Reading, 3rd year

- **GPA:** 3.01/4.00
- **Minors:** Mathematics, Physics

Nugegoda

Jun 2023 - Jun 2027

### Nalanda College

GCE Advanced Level (2021)

- Mathematics: C | Physics: A | Chemistry: C | English: A

Colombo 10

2012 - 2020

## TECHNICAL SKILLS

- **Languages:** C, Java, Python, MySQL, R
- **ML Frameworks & Libraries:** TensorFlow, Keras, Scikit-learn, Hugging Face
- **Cloud & DevOps:** CI/CD (GitHub Actions), Docker, VPS/Shared Hosting, Linux (WSL)
- **Web & Tools:** FastAPI, React, Git, VSCode, Jupyter Notebook
- **Key Competencies:** Language-Agnostic Development, Rapid Prototyping, Code Comprehension, Problem-Solving

## PROJECTS

**HCI** ▪ **IoT** ▪ **Circuit Design** ▪ **Computer Vision** ▪ **GenAI**

### Lumina: Intent-Aware Robotic Lamp

Dec 2025 - Jan 2026

- Engineered an interactive robotic lamp for the **Human Computer Interaction (HCI)** module, applying **HCI principles** to design natural multimodal interactions using hand tracking and **Google's Gemini 2.5 Flash Native Audio API**.
- Designed and soldered a **custom motherboard on a dot board** to integrate the ESP32, power management, and peripherals, ensuring a compact hardware assembly.
- Developed a distributed system architecture where **Python (MediaPipe)** handles AI inference and communicates via **UDP** with the embedded hardware.
- **GitHub:** <https://github.com/shaveenudayanga/lumina>

**FastAPI** ▪ **MySQL** ▪ **Azure VPS**

### Lamitie 2025: Junior Batch Social Event System

Jan 2026

- Developed a high-performance backend using **FastAPI** and **Async SQLAlchemy** to handle student registrations and event logistics.
- Automating invitations via email workflows with QR codes and implemented a scanning API for real-time attendance tracking.
- Deployed the full stack to an **Azure VPS** with self-signed SSL, connected to a remote **Hostinger MySQL** database, and automated deployment via **GitHub Actions** over SSH.
- **GitHub:** <https://github.com/shaveenudayanga/lamitie-25>

**Spring Boot** ▪ **Microservices** ▪ **PostgreSQL**

### Customizable Document Tracking System

Aug 2025 - Nov 2025

- Architected a dynamic workflow engine (Service Oriented Computing Module) to digitize bureaucratic processes, enabling custom route mapping and real-time document tracking.
- Built a robust microservices backend using **Spring Boot** and **PostgreSQL**, implementing end-to-end encryption, role-based access control (RBAC), and audit trails.
- Designed an API-first architecture supporting mobile QR verification and integrated **Docker** CI/CD pipelines for containerized deployment.
- **GitHub:** <https://github.com/shaveenudayanga/Customizable-Document-Tracking-System>

## The Wheels in Motion

Dec 2024

- Built a data analysis pipeline using **Pandas/Seaborn** to extract actionable insights from public vehicle datasets.
- Implemented **Zero-Shot Classification** on Kia customer reviews utilizing Hugging Face's *facebook/bart-large-mnli* model.
- Deployed a responsive dashboard with **Plotly Dash**, featuring dynamic filtering and real-time sentiment visualization.
- **GitHub:** <https://github.com/shaveenudayanga/the-wheels-in-motion>

Explore more projects on my GitHub: [github.com/shaveenudayanga](https://github.com/shaveenudayanga)

## LEADERSHIP & VOLUNTEER EXPERIENCE

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### IEEE CS Student Branch Chapter, USJ

*Head of Logistics Committee*

Jan 2025 - Jan 2026

- Orchestrated logistics for 'Beauty of Cloud', a collaborative workshop with AWS Sri Lanka, training 60+ undergraduates.

### Startup Hub, USJ

*Vice President of Tech & Innovation*

Oct 2024 - Oct 2025

- Spearheaded the strategic planning and execution of a major university innovation competition.

### SEDS J'pura

*Rocketry Divisional Manager*

Sep 2023 - Sep 2024

- Developed the technical framework for the annual rocket modeling competition and organized practical workshops.

## CERTIFICATIONS

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### Coursera (DeepLearning.AI & Stanford)

*Machine Learning Specialization*

Completed

Authored by Andrew Ng. Covers Supervised/Unsupervised Learning and Advanced Algorithms. (ID: GI5K7MDNT03O)

### edX (MITx)

*Introduction to Aerospace Engineering*

Completed

Astronautics and Human Spaceflight (16.00x). (ID: 74b4f126593f4b6eb808580da0acc0a5)

## ACHIEVEMENTS

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- **2025 | Selected for BSc (Hons) in Computer Science:** Ranked in the top 18 of 120 students, forming the exclusive cohort that met the 3.0 CS GPA cutoff required for selection.

## RELEVANT COURSEWORK

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- **Computer Science:** Data Structures & Algorithms, Machine Learning, Artificial Intelligence, Swarm Intelligence, Computer Security, Operating Systems, DBMS, Software Quality Assurance, Computer Graphics, Net Centric Computing, Service Oriented Computing
- **Math & Physics:** Calculus, Differential Equations, Logic & Set Theory, Electronics (Analog/Digital), Statistical Physics

## REFERENCES

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**Prof. P. Ravindra S. De Silva***Professor*

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