KUHANANTH CHANDRAPALAN

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Summary

Backend-focused Software Engineer and Data Science graduate with expertise in architecting scalable server-side logic and high-performance RESTful APIs. Proficient in Python, SQL, and Docker, with a proven track record of deploying secure, cloud-aware applications and integrating complex data models into production. Experienced in remote collaboration and dedicated to building robust technical infrastructure that supports data-informed decision-making in mission-driven, global environments.

Education

Sri Lanka Institute of Information Technology   *Malabe, Sri Lanka*
BSc.(Hons) in Information Technology Specializing in Data Science   *2021 – 2025*

St.John's College   *Jaffna, Sri Lanka*
G.C.E Advanced Level - Physical Science   *2007 – 2020*

Experience

Bohar Solutions - Sri Lanka   *Jaffna, Sri Lanka*
Associate Software Engineer   *Jul 2025 – Present*

- As an Associate Software Engineer, I collaborate with internal stakeholders to analyze business requirements and architect high-performance RESTful APIs using PHP and MySQL to support retail POS systems, including inventory and employee management modules. I optimize database schemas and queries to ensure data consistency, high-speed performance, and alignment with business workflows, while managing secure authentication protocols (session- and token-based) to protect sensitive system features.

- My role involves supporting release planning and deployment through Git-based CI/CD workflows and integrating third-party APIs for seamless data exchange. Additionally, I leverage AWS DynamoDB for scalable, low-latency data access and support frontend improvements using JavaScript to ensure efficient API consumption, clear functional requirement implementation, and responsive user experiences in a collaborative, cloud-aware environment.

Blue Chip Technology Asia - Sri Lanka   *Malabe, Sri Lanka*
Data Science & Machine Learning Intern   *Feb 2024 – Jul 2024*

- As a Machine Learning and Data Science Intern, I worked extensively with Python to design, build, and deploy data-driven backend systems. I developed, trained, and evaluated machine learning and deep learning models using PyTorch, while also performing data preprocessing, feature engineering, and result visualization. In parallel, I implemented Python-based backend services using Flask to expose models through secure, scalable RESTful APIs, enabling seamless integration with web applications and supporting production-ready, data-driven decision-making.

- I collaborated on Python-based backend development using Flask to expose machine learning models through RESTful APIs for integration with web applications. This role strengthened my ability to bridge data science workflows with production-ready backend systems, while working effectively within a collaborative, remote development environment.

Projects

Emotion-aware Facial Emotion Recognition for Adaptive Learning System (E-FERALS   **Dec 2025**

- Conducted applied research on real-time facial emotion recognition to monitor student engagement in online learning environments using deep learning techniques.
- Designed and implemented a hybrid system combining CNN-based emotion classification and YOLOv8 for real-time face detection across live and recorded lecture scenarios.
- Developed an adaptive re-engagement mechanism that recommends personalized short video interventions when learner boredom is detected during recorded sessions.
- **Technologies** Python, TensorFlow, PyTorch, YOLOv8, CNN, OpenCV, Flask, Jupyter Notebook.
- 🐙 Emotion Monitoring System

Blockchain and V2X Communication Research   **May 2025**

- Conducted extensive research on Vehicle-to-Everything (V2X) communications, leveraging machine learning and deep learning algorithms for optimized connectivity and security.
- Employed blockchain technology to ensure data transparency, integrity, and secure legal transactions within the V2X framework.
- **Technologies** Python, TensorFlow, Ethereum, Solidity, Visual Studio Code.
- 🐙 V2X communication

Information Retrieval System — Nov 2024

- An AI-powered chatbot leveraging Large Language Model (LLM) concepts, designed to optimize the operational efficiency of Powerhouse Solutions Private Limited's e-commerce platforms.
- **Technologies** Python ,Google collab ,Visual Studio Code ,Mongo DB —React

 Happy bot

Car Price Prediction Web Application — May 2025

- Designed and developed a predictive web application for estimating car prices based on key features such as manufacturing date, mileage, and engine condition.
- Trained and implemented machine learning models using diverse automotive datasets.
- Created an intuitive and user-friendly interface for quick and efficient price estimation.
- **Technologies** Python, Flask, Scikit-learn, Pandas, Streamlit.

 Car Price Prediction

Image Identification and Segmentation using YOLOv8 — May 2024

- Built an image segmentation and object identification system leveraging YOLOv8, capable of precise object detection and segmentation.
- Implemented real-time inference capabilities suitable for various computer vision applications.
- **Technologies** Python, YOLOv8, PyTorch, OpenCV, Jupyter Notebooks.

 Image Identification

Certifications

Certifications(issued by linkedin)

- Become a Data Analyst
- Excel Managing and Analyzing Data
- Python Programming
- SQL Data Reporting and Analysis
- Kotlin Essential Training Object-Oriented and Async Code

Volunteering & Leadership

Kalaanethra Cultural Community — Jan 2025
Treasurer, Faculty of Computing, SLIIT — *Sri Lanka*

- Managed financial responsibilities and budget oversight for Kalaanethra, the sole Tamil cultural community within the faculty.
- Coordinated various cultural programs and community events, promoting cultural awareness and community involvement.
- Organized and supported charitable events aimed at benefiting the broader community through donations and outreach initiatives.

Prefects' Guild — 2019/2020
Senior Prefect at St. John's College — *Sri Lanka*

Technical Skills

Diverse Programming	Java, Python, PHP, C, C++
Web Development	JavaScript, HTML, CSS
Frameworks Libraries	Flask, Django, React JS, Next JS, Spring Boot, Blockchain, Solidity
Databases	MySQL, Oracle, MongoDB, AWS DynamoDB
DevOps CI/CD	Git, GitHub Actions (basic), Docker
IDE Tools	Power Bi, VS Code, Jupyter Notebooks, AWS, Cursor, Docker

Soft Skills

- **Quick Adapter**
- **Communication**
- **Time Management**
- **Problem Solving**

Languages

- **English** – Full Professional Proficiency
- **Tamil** – Native
- **Sinhala** – Limited Working Proficiency

References

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