

# ISHARA DISSANAYAKA

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**Portfolio** : <https://isharatharinduportfolio.netlify.app/>

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## SUMMARY

I am an ambitious, dependable, trustworthy, and diligent individual who aspires to develop my career and attain my goals. I am in search of a reputable platform where I can encounter demanding opportunities and contribute my skills and collaboration to drive the growth and triumph of the organization. Presently, I am seeking an internship in the realm of Data Science to establish a flourishing professional journey.

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## EXPERIENCE

**Jacklup Solutions** - Junior Software Developer (Internship)

July 2024 – Present

- Worked with teams to design and maintain responsive websites and web apps.
- Integrated front-end with back-end systems to improve user experience.
- Used HTML, CSS, JavaScript, PHP, and basic SEO techniques for high-quality, maintainable code.
- Took part in code reviews and enhanced performance.
- Applied security practices to protect user data.

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## EDUCATION

**BSc (Hons) in Information Technology Specialising in Data Science**

Aug 2021 - Aug 2025

Sri Lanka Institute of Information Technology

- Higher Diploma Program in Information Technology.
- Specialization in data science final years undergraduate.

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## CERTIFICATES

- Certified in AI/ML Engineer - Stage 1 [SLIIT]
- Certified in SQL Essential Training [LinkedIn]
- Certified in Python Data Structures and Algorithms [LinkedIn]
- Certified in Data Engineering Foundations [LinkedIn]
- Certified in Statistics Foundations 1: The Basics [LinkedIn]
- Certified in Statistics Foundations 2: Probability [LinkedIn]
- Certified in Learning Data Science: Understanding the Basics [LinkedIn]
- Certified in Learning Data Analytics: 1 Foundations [LinkedIn]
- Certified in Data Visualization: Story telling Data Visualization: Storytelling [LinkedIn]
- Certified in Azure Fundamentals (AZ-900) [LinkedIn]
- Certified in Power BI: Integrating AI and Machine Learning [LinkedIn]

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## SKILLS

**Statistical** : Statistics, Probability, Statistical Analysis, Linear Algebra

**AI and Machine Learning** : Linear Algebra, Neural Networks, Deep Learning, Natural Language Processing, TensorFlow, Reinforcement Learning.

**Data Analysis** : Microsoft Excel Power BI

**Cloud Computing** : Microsoft Azure, AWS (Reading)

**Programming Languages** : C, C++, Java, JavaScript, PHP, python, kotlin, Express, spring boot,

**Web Development** : HTML, CSS, JavaScript, Streemlit, React, SEO

**Software Development**: Git, github

**Database Management** : MySQL . Server, SQL, mongo DB

**Other Skills** : communication skill, Leadership ,creativity, Problem-solving and critical thinking, Strong analytical skills

## Projects

**Project Title:** Enhancing Autonomous Vehicle Safety In-Cabin using Integrated Facial and Voice Recognition

**Role:** Lead Developer – In-Cabin Monitoring & Security Module

**Duration:** [Insert Duration, e.g., Jan 2024 – Present]

**Key Contributions:**

- Designed and implemented real-time in-cabin monitoring systems to detect weapons, unauthorized items, and anomalous behavior using YOLOv5 and CNN-based models.
- Developed a voice recognition module to analyze aggressive tones, unauthorized commands, and speaker verification using Wav2Vec 2.0 and DeepSpeech.
- Simulated autonomous vehicle environments using CARLA Simulator for validating detection models in real-world-like scenarios.
- Integrated multiple sensory inputs (camera, microphone, environmental sensors) to enable context-aware decision making for adaptive comfort and safety.
- Contributed to the design and implementation of Emotion AI for recognizing stress or discomfort in passengers, enabling real-time adjustments to lighting, temperature, or music.
- Collaborated with cross-functional teams to build a system diagram and architecture covering perception, ethical decision-making, collision avoidance, and comfort adaptation.

**Technologies Used:** Python, TensorFlow, OpenCV, PyTorch, CARLA, YOLOv5, Wav2Vec 2.0, DeepSpeech, Flask (for integration), Git

### **Smart Energy Monitoring & Prediction System using ESP32, Firebase, and Machine Learning**

**Duration:** [Insert duration, e.g., Jan 2025 – May 2025]

**Tools & Tech:** ESP32, Firebase Realtime Database, Node-RED, Python, TensorFlow/Scikit-learn, Machine Learning, MQTT, Arduino IDE, JSON, Wi-Fi, Real-time Sensors

**Project Description:**

Developed and deployed a real-time IoT-based smart energy monitoring system using the ESP32 microcontroller. The system captures voltage, current, and energy consumption data from physical sensors and sends it to Firebase using Wi-Fi. Integrated with Node-RED to visualize data and trigger events.

Implemented machine learning models using Python (via Node-RED integration) to predict future energy consumption based on historical patterns and sensor inputs. Used regression algorithms for real-time prediction and anomaly detection.

**Key Responsibilities:**

- Configured ESP32 to collect voltage/current data and send it to Firebase in real time.
- Integrated Firebase with Node-RED using REST API and MQTT for live monitoring and control.
- Preprocessed sensor data and trained machine learning models to predict energy usage.
- Built dashboards and flows in Node-RED for data visualization and event-based automation.
- Ensured secure and efficient communication between hardware and cloud.

**Achievements:**

- Achieved >90% prediction accuracy for energy usage trends.
- Designed a fully functional end-to-end IoT + ML system.
- Developed an extendable platform for smart home energy analytics.

### **Jackaloops Solutions Pvt Ltd : [lankaqrmenus](https://lankaqrmenus.com) <https://lankaqrmenus.com> -**

Developed and maintained web applications using PHP, MySQL, and JavaScript.

Worked on a restaurant management system project that included:

Menu Management: Adding and managing menu items with category-based filtering.

Banner Management: Uploading, updating, and deleting promotional banners.

Dashboard Features:

Admin Dashboard: Comprehensive control over the system, including user management, security settings, and analytics.

Manager Dashboard: Tools for day-to-day operations, such as managing orders, staff, and promotions.

Implemented security techniques to ensure data integrity and prevent unauthorized access.

Successfully integrated functionality for managing liquor menus and related promotions.

Enhanced user experience with responsive design using HTML, CSS, and JavaScript.

### **Student mental health prediction (MindMoodMeter):**

- Supervised Learning,Python(Programming Language), Front-End Development(Streamlit), Deployment(Google Colab),Visual Studio Code
- Contribution: Implementing the decision tree, and random forest classification models to accurately predict stress levels.creating the user interface using Streamlit.

### **Chatbot for Online Customer Support in E-commerce:**

- Technology and Language :Natural Language Processing (NLP),Python Programming Language: Flask, TensorFlow and Keras, MySQL, Tkinter
- Contribution: Implementing NLP algorithms using NLTK.Enabling the chatbot to interpret and process complex language, ensuring context-sensitive and natural interactions with customers.

### **Eye care management system:**

- Technology and Language :React, Mongo DB, Express, Node JS,Nodeman,bootstrap,HTML,javascript Software: Visual Studio Code, IntelliJ IDEA
- Contribution: Create Blogs, delete Blogs, update blogs, and edit blog user views, and all related Blog pages

### **MAD Project Online Education Platform:**

- Technology and Language :Kotlin, Firebase Database, Android Studio,Figma
- Contribution: Creating quizzes, adding quizzes, updating quizzes and deleting quizzes

### **Computer Part Store Systems :**

- Technology and Language :HTML,CSS,JS,PHP,MySql Softwares,PhpStrom,Xampp server,Visual Studio
- Contribution: Feedback, ER diagram, Schema, Normalized Schema, Part of the creating SQL code and group management

### **IWT Project Online Medical Portal (Group Leader):**

- Technology and Language :HTML,CSS,JS,PHP,MySql Softwares,PhpStrom,Xampp server,Visual Studio Code
- Contribution: User Management Part(appointment and search bar, doctor booking, create, edit, update and delete)