

Madhusha Perera

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Computing (Information Systems) student with hands on experience in software and web development using **Java, Python, JavaScript, HTML, and CSS**. Strong foundation in **data structures, algorithms, and networking**, with practical experience in **server client systems, web hosting, and remote database server configuration**. Interested in building scalable software solutions and exploring **machine learning and artificial intelligence**. Passionate about **problem solving, system design, and continuously expanding technical expertise**.

TECHNICAL SKILLS

Programming: Java, Python, JavaScript

WebDevelopment: HTML, CSS, JavaScript

Databases: MySQL, Remote DB configuration

Networking: DHCP, Mail & File Server, Web Hosting

Software Engineering: DSA, Test Automation

Tools: Git, Apache/XAMPP, MySQL Workbench, Selenium, JUnit

PROJECTS

Gesture Recognition System for Sign Language (Research & Development Assistant – Ongoing)

- Developed a real-time gesture-to-text translation system using **Python**, **OpenCV**, and **MediaPipe** to accurately track 21 3D hand landmarks for sign language interpretation.
- Engineered and trained deep learning models using **TensorFlow**, performing data preprocessing with **NumPy** to ensure high classification accuracy across diverse lighting conditions.
- Optimized model deployment by converting high-complexity architectures into TensorFlow Lite (TFLite) format, reducing latency for real-time inference on mobile.

Veterinary Clinic POS & Management System – Java

- Designed and developed a **Java-based (POS) system** for managing veterinary clinic operations.
- Implemented modules for **user records, billing, and transaction processing**.
- Applied **object-oriented programming concepts** and structured data handling to manage clinic information efficiently.

Veterinary Clinic Management System – Web Application

- Developed a **web-based version of the veterinary clinic management system** using **HTML, CSS, JavaScript**, and backend integration.
- Implemented functionalities for **user records, service management, and billing operations**.

Web CRUD Application with Remote Database

- Developed a **dynamic website with Create, Read, Update, Delete (CRUD) operations**.
- Integrated the application with a **remote MySQL database server**.
- Configured **web server environment and database connectivity**.

GPA Calculation Web Application

- Developed a **web-based GPA calculator** using **HTML, CSS, and JavaScript**.
- Implemented **dynamic grade input and real-time GPA calculation** entirely on the client side.
- Designed a **user-friendly interface** for quick and accurate results.

RESEARCH

Bias in Multilingual NLP Models for Low-Resource Languages (*Ongoing Research*)

- Investigating **bias and performance disparities in multilingual Natural Language Processing (NLP) models** when applied to **low-resource languages**.
- Analyzing how existing language models handle **limited training data and linguistic diversity**.
- Exploring approaches to **improve fairness and representation** in multilingual AI systems.

EDUCATION

BSc in Computing (*Information Systems*) - Undergrad

University of Greenwich, UK (studies at LNBTI, Sri Lanka)

Foundation Year: 2023 – 2024

Degree Program: 2024 – 2028

Coursework: Data Structures & Algorithms, Computer Networks, Software Engineering, Database Systems, Web Development, Software Testing

Ordinary Levels

2022

LANGUAGES

English, Sinhala, Japanese (N5)

INTERESTS

- Technology & System Design
- Research in Artificial Intelligence
- Fitness & Strength Training
- Playing guitar

REFERENCES

Milindu Jayasinghe - Senior Executive Internal Audit
Sumathi Holdings
Email: milindu.sh@sumathi.com
Tel: 0752416632

Janith Perera - Senior Lecturer
LNBTI, Sri Lanka
Email: janithp@edu.lnbtii.lk