Rajarathnam Sanjeevan

SOFTTWARE ENGINEERING @DATA SCIENCE

Personal Details

0752590685
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Links

Portfolio
https://my-profile-portfolio-git-main-san-jeevans-projects-79b0898b.vercel.app/

Githup

Skills

Communication Skills

Problem Solving

Leadership

Time Management

Positive Attitude

Techical Skills

Programming Language:

- **c++**
- **Java**
- **Python**
- **C# Asp.Net**

Frontend Development:

- **React**
- **Boostrap**
- **Material UI**
- **Tailwind CSS**
- **JavaScript**
- **TypeScript**

Backend Development:

- **Php**
- **Node js**
- **SpringBoot**
- **Next.js 14**

Professional Summary

I am a passionate and enthusiastic Full Stack Developer with a strong foundation in Software Engineering and Data Science. As a recent graduate, I have built a solid portfolio by working on diverse academic and personal projects. I specialize in crafting robust and scalable web applications using modern front-end technologies like React and Next.js, and back-end frameworks including Node.js, Spring Boot, PHP, and ASP.NET (C#). I am also proficient in working with various databases such as MySQL, PostgreSQL, and MongoDB. In addition to web development, I have a keen interest in data science and analytics, with hands-on experience in Python, R Studio, and tools used for data processing and machine learning. I am eager to contribute innovative solutions that enhance user experience and support business growth.

Work Experience

Graphic Designer & IT Technician, Nugegoda

03/2024 - 04/2025

- Designed marketing materials and digital assets using Adobe Creative Suite.
- Provided IT support, troubleshooting hardware and software issues.
- Assisted in maintaining company systems and ensuring data security.
- Supported internal users with day-to-day technical queries.

Education

Bsc in Software Engineering, Cardiff metropolitan, ICBT

03/2020 - 03/2025

Gained hands-on experience in java, SpringBoot, Php, C#Asp.net, Android Studio, mysql, MongoDb and Full-Stack web Development through accademic Project. I am a dedicated and versatile software developer and data scientist with a strong passion for building efficient, intelligent, and user-centric applications. With a solid background in both software engineering and data science, I specialize in full-stack web development and data-driven solutions.

G.C.E.Advance Level | 2019 | Commerce Stream:, Colombo Hindu College , COLOMBO

07/2016 - 07/2019

Specilaized in Accounts, Bussines studies, Information technology

G.C.E.Ordinary Level, Colombo Hindu College, COLOMBO

Achived Strong grades

Project

Library Management System – Java Swing GUI

Developed a comprehensive desktop application for managing a library's operations. The system supports Admin and Customer (Student/Reader) roles, each with secure login panels. Admins can add, edit, delete, and search books, manage user accounts, track issued and returned books, and monitor overdue penalties. Customers can search for books by title, author, or category, request book issues, and view their borrowing history. The application uses Java classes and inheritance to model core entities, and data is stored using ArrayLists or local files.
Technologies: Java, Swing, NetBeans, SQL

Database:

- MySQL
- MongoDb
- Firebase

Other Technologies & Tools:

- Figma
- PhotoShop
- Illustrator
- Canva

Data Science Programming & Scripting Languages:

- Python
- R

Data Analysis & Manipulation:

- Matplotlib, Seaborn

Machine Learning & Statistical Modeling:

- scikit-learn (Random Forests, Gradient Boosting, Logistic Regression, K-Nearest Neighbors), XGBoost

Deep Learning:

- TensorFlow, Keras (Convolutional Neural Networks, model serialization with H5 and TFLite)

Model Deployment:

- Flask (REST APIs, web applications)

Data Storage & Formats:

- CSV, Excel, SQLite

Languages

Tamil

English

Sinhala

Doctor Appointment System – C# ASP.NET MVC

Built a secure web application for managing doctor appointments with separate roles for Admins, Doctors, and Patients. Features include doctor profile management, appointment scheduling, patient registration, search by specialization, and instant booking confirmations. Integrated notifications and reminders for upcoming appointments. Developed a clean, responsive UI with Bootstrap and Razor Views.
Technologies: C#, ASP.NET MVC, HTML5, JavaScript/jQuery, Bootstrap 4, Microsoft SQL Server

Salon Booking App – Android Mobile Application

Designed and implemented a mobile app that enables customers to browse salon services, view details, and book appointments through a user-friendly interface. Features include account creation, booking management, and notifications. Data persistence was handled with SQLite, and the app was built using Android Studio and Java.
Technologies: Java, XML, SQLite, Android Studio

eCommerce Web Application– Java & React

Developed a production-grade online shopping platform supporting Customers, Sellers, and Admins. Implemented robust authentication with JWT, integrated Stripe and Razorpay payments, and developed dashboards with analytics. Built responsive front-end components and secure backend APIs.
Technologies: Java (Spring Boot), React, Tailwind CSS, Redux Toolkit, JWT, MySQL, Stripe, Razorpay

Enterprise Food Ordering Platform – MERN Stack

Built a scalable, production-level SaaS platform supporting complete restaurant management. Features include secure Auth0 authentication, Stripe payments, image handling via Cloudinary, advanced filtering, and live order tracking. Deployed on Render with responsive UI design.
Technologies: React.js, Node.js, Express.js, MongoDB, Tailwind CSS, Auth0, Stripe, Cloudinary, Vite

Fullstack Food Ordering App – Next.js & MongoDB, – Next.js & MongoDB

This Fullstack Food Ordering App is a beginner-friendly project built using Next.js 14 and MongoDB, designed to teach the fundamentals of building modern web applications. The app features a fully functional restaurant page with dynamic menu listings, user authentication, cart functionality, and an intuitive admin panel. Throughout the development process, key concepts such as server-side rendering, API routes, session-based authentication, form handling, and database integration using MongoDB are implemented. Users can sign up, log in, update their profiles, browse menu items, and manage their orders. Admins have complete control over categories, menu items, and user accounts via a secured dashboard. With a focus on clean UI and full CRUD operations, this project is a valuable addition to any developer's portfolio and provides practical experience with modern JavaScript frameworks, MongoDB Atlas, and Next.js App Router architecture.

Technologies: Next.js 14, MongoDB, React, Tailwind CSS, NextAuth.js, Google OAuth2

London House Price Prediction – Machine Learning

Designed and deployed a complete **machine learning pipeline** to predict London property prices based on historical housing data. Performed comprehensive **data cleaning**, including imputing missing values and encoding categorical variables such as property type and tenure. Conducted **exploratory data analysis (EDA)** using seaborn and matplotlib to visualize feature distributions and identify key predictors. Trained

and tuned a **Random Forest Regressor**, achieving strong performance measured by R^2 and Mean Absolute Error.

Integrated the trained model into a **Flask web application**, enabling users to input property details and receive real-time price predictions through a simple web interface. This project demonstrates expertise in **supervised learning, model deployment, and user-focused data solutions**.
Technologies: Python, scikit-learn, pandas, seaborn, Flask

Vehicle Rent Booking System – PHP Web Application

Built a platform for managing vehicle rentals, with Admin tools for vehicle inventory and booking approvals. Customers can register, browse vehicles, make bookings, and view rental history. The system automates rental workflows and reporting.
Technologies: PHP, SQL, HTML5, CSS3, Bootstrap 4, jQuery

Twitter Sentiment Analysis – Machine Learning

Developed an **end-to-end sentiment analysis pipeline** for classifying tweets as positive, negative, or neutral. Collected and cleaned raw tweet datasets, performed **text preprocessing** (tokenization, stop-word removal, vectorization), and engineered features to improve model accuracy. Evaluated and compared multiple classifiers including **Logistic Regression, Random Forest, and Gradient Boosting**, selecting the best-performing model through cross-validation and metrics such as accuracy and F1-score.

Serialized the trained model using pickle and deployed it via a **Flask web application** that accepts user input and instantly predicts sentiment. This project demonstrates strong skills in **natural language processing, supervised classification, and production-ready deployment**.

Technologies: Python, scikit-learn, pandas, NumPy, seaborn, Flask, pickle

Potato Leaf Disease Detection - Deep Learning Web Application

Developed a **deep learning–based image classification system** to detect potato leaf diseases, including **Early Blight, Late Blight, and Healthy leaves**, with high accuracy. Built and trained a **Convolutional Neural Network (CNN)** using TensorFlow/Keras to process thousands of labeled images with data augmentation techniques such as rotation, scaling, and flipping to improve model generalization.

Integrated the trained model into a **Flask web application** that allows users to upload images through a clean, responsive interface. Upon upload, the system preprocesses the image, predicts the disease class, displays the confidence score, and provides **detailed treatment recommendations** to help farmers take timely action. Designed the frontend using Bootstrap to ensure the application is accessible across devices.

This project demonstrates practical expertise in **deep learning, image preprocessing, model deployment, and user-focused web development**.

Technologies: Python, TensorFlow/Keras, Flask, Bootstrap, NumPy, PIL

Face Recognition Attendance System – Computer Vision Web App, – Computer Vision Web App

Created a real-time attendance system using OpenCV and KNN for face recognition. Included an Admin Panel for managing attendance records, with both Flask and Streamlit interfaces.
Technologies: Python, OpenCV, Flask, Streamlit, NumPy, Pandas

Plant Disease Detection System – Deep Learning and NLP (Final Research Project),

Designed and implemented an advanced AI-powered web application for early detection of plant leaf diseases and delivery of multilingual treatment guidance to farmers. Developed a robust **Convolutional Neural Network (CNN)** model using TensorFlow/Keras to classify **10 different leaf diseases** from high-resolution RGB

images. The pipeline incorporated **data augmentation** (random rotations, shifts, zooming, flipping) and preprocessing techniques to improve model generalization, achieving over **93% validation accuracy**.

The application features a **multilingual interface** with real-time translation of disease names and treatment instructions via **Google Translate API**, as well as **dual text-to-speech support** using gTTS (Tamil) and the Web Speech API (English). The web platform is powered by **Flask**, providing secure image upload, prediction APIs, and responsive templates. Model inference was optimized using **TensorFlow Lite** quantization-aware training for faster performance and reduced memory footprint, enabling deployment on cloud platforms and edge devices such as Raspberry Pi.

This project demonstrates expertise in **deep learning, natural language processing, web development, and scalable deployment**, bridging cutting-edge AI with practical agricultural solutions.

Technologies:
Python, TensorFlow/Keras (CNN), TensorFlow Lite, Flask, Google Translate API, gTTS, Web Speech API, NumPy, Pandas, OpenCV, Docker, HTML5, CSS3, Bootstrap 4, Raspberry Pi

Extra Curricular Activities

Moratuwa University

1. **I have taken Python course e-certificate from Moratuwa University.**
2. **I have taken Python Advance course e-certificate from Moratuwa University.**
3. **I have taken Frontend Advance course e-certificate from Moratuwa University.**
4. **I have taken Backend Advance course e-certificate from Moratuwa University.**