# **DUSHAN RATHNAKUMARA**



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Dushan Rathnakumara



"Bhagya Sewana", Nikapitiya, Ussapitiya, Sri Lanka



Dushan Bhagya

I am a dedicated and diligent professional who has recently graduated with a BSc (Hons) Degree in Information Technology from the Sri Lanka Institute of Information Technology in Malabe. I have gained practical experience as an Intern QA Engineer and Associate QA at ABi Systems, where I developed strong skills in software testing and quality assurance. However, I am now transitioning to a career to development field. My background in quality assurance has given me a solid foundation in software development processes, and I am eager to apply my technical skills and continue learning as I build my career in developing.

# **Experience**

Web Development Freelancer

Feb 2025 - Present

Associate QA Engineer ABi Systems June 2024 - Feb 2025

**Intern QA Engineer** 

Dec 2023 - June 2023

ABi Systems

- Execute and document test cases based on system requirements and specifications to ensure comprehensive coverage.
- Identify, log, and track software bugs and issues using defect management tools to maintain high-quality standards.
- Collaborate with developers and cross-functional teams to ensure quality throughout the software development lifecycle.
- Participate in requirement analysis to understand user needs and translate them into effective test scenarios.
- Conduct manual testing to identify defects and validate the software against functional and non-functional requirements.
- Perform regression testing to verify the stability of the product after changes or updates.
- Assist in the creation and implementation of automated test scripts and strategies to enhance testing efficiency.
- Analyze test results, generate detailed reports, and provide actionable insights for product improvements.

## **Education**

**BSc (Hons) Degree Information Technology specializing in Information Technology** Sri Lanka Institute of Information Technology, Malabe, Sri Lanka

Feb 2021 - Nov 2024

# **Projects Experience**

## MCP CV Chatbot & Email Server

**Sept 2025** 

Developed a Model Context Protocol (MCP) server that parses a resume and uses an LLM (OpenAI GPT) to answer dynamic questions about my CV. Built a secure email notification endpoint with Gmail SMTP integration and optionally connected a React/Next.is frontend for interactive chat. Deployed a live server for demonstration.

- Backend: Python, FastAPI, MCP Python SDK, aiosmtplib, OpenAI API
- Frontend: React, Next.js
- · Other Tools: JSON, RapidFuzz (for fuzzy search), GitHub for version control, Uvicorn for deployment

## Developing a 3D Visualization System to Enhance Student Learning in Math Problems

This Project introduces an innovative approach to enhance the mathematical skills of GCE O/L students, focusing on surface area, volume of solids, and geometric concepts. It utilizes NLP and TensorFlow for interactive learning, featuring 3D visuals to aid problem-solving by 25% and reduce solving time. The system enhances spatial reasoning and deepens understanding of mathematical principles. Trials confirm its effectiveness in improving students' math abilities and learning outcomes.

· Technologies: NLP, Tensorflow, Dart

#### Social Media Platform

A social media platform designed specifically for food and beverage reviewers to share their dining experiences. The platform features a user-friendly React-based UI for both customers and staff members, coupled with a robust backend built on the Spring Boot framework for seamless integration and functionality.

• Technologies: Java, Springboot, Firebase

#### Voting App

A Voting App where you can create polls and vote them

Link: https://it21085444.github.io/Voting-App/login

• Technologies: MongoDB, NextJS

## **Ocean Protection Web Application**

A web application dedicated to ocean protection, empowering users to contribute to preserving and conserving our oceans. The platform includes a React-based user interface for customers and an admin panel, all supported by an integrated backend developed using ExpressJS.

• Technologies: MERN Stack

#### Citizen Information Management System

An innovative web application for citizen management, fostering efficient communication and collaboration between citizens and government authorities. The system includes distinct user interfaces for citizens and administrators, seamlessly integrated with a robust backend powered by ExpressJS.

· Technologies: MERN Stack

## Hotel Reservation system /Android app

An android app to make hotel reservations

· Technologies: Java, Firebase

#### **Hotel Management System**

· Technologies: Java, Bootstrap

#### Vehicle Insurance Management System

· Technologies: PHP, HTML, CSS, Bootstrap

#### **Certificates**

Postman API Fundamentals Student Expert Course

**AWS Academy Graduate - AWS Academy Cloud Foundations** 

Microservices Architecture for Absolute Beginners

**Artificial Intelligence Masterclass Comprehensive Course** 

## **Research Publications**

## Enhancing G.C.E. Ordinary Level Mathematics Through Adaptive Learning in Sri Lanka

Published in: 2024 6th International Conference on Advancements in Computing (ICAC)

• DOI: 10.1109/ICAC64487.2024.10850923

#### **Achievements**

• Recognized and Awarded as the top-performing intern

## **Key Skills**

Programming Languages:

Java

JavaScripts

PHP

C/C++

HTML/CSS

Frame Works:

• Spring Boot

• NodeJS / ExpressJS

Springboot

• React / Next

• Flutter / Dart

Databases:

MongoDB

SQL Server

MySQL

• PostgreSQL.

Other:

• Selenium / Appium

• Zeen Automation

· API Testing

· GitHub

Jira

Cloud:

AWS

· Microsoft Azure

#### Reference

**Buddika Harshanath** 

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