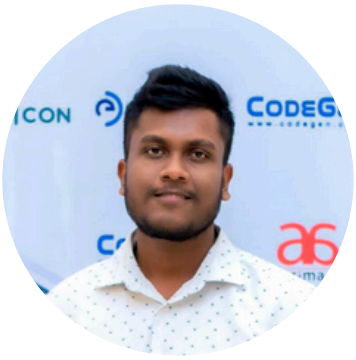
MILAN WEERASINGHE

COMPUTER SCIENCE UNDERGRADUATE



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SUMMARY

4th-year Computer Science undergraduate at the University of Sri Jayewardenepura, deeply passionate about building impactful software and leveraging technology to solve real-world problems. My project experience spans various applications, from developing a simple artist management system to microservice-based solutions for hotel booking management. In my work, I have utilized languages and technologies such as Java, JavaScript, and SQL, I am also familiar with front-end frameworks like React and backend tools like Spring Boot. I bring a solid understanding of software development methodologies, including agile practices and the principles of SOLID design, to build maintainable and efficient code. Eager to expand my expertise further, I am especially interested in getting hands-on experience with AI/ML and full-stack development. Through coding, I aspire to make meaningful contributions to innovative projects, continuously improve my skills, and ultimately drive positive change in technology and society.

CORE COMPETENCIES

- Strong knowledge of software development methodologies (Agile, Scrum) and principles (SOLID).
- Hands-on experience with Object-Oriented Programming (OOP).
- Skilled in working with both relational databases (MySQL) and non-relational databases (MongoDB).
- Proficient in designing and consuming RESTful APIs for seamless integration between services.
- Effective analytical and critical thinking skills to approach and resolve complex problems.
- Solid understanding of data processing, model training, and neural networks.

TECHNOLOGIES AND TOOLS

- Front-end development: HTML, CSS, Tailwind CSS, React.js
- Back-end development: Node.js, Express.js, Java, Spring Boot
- Databases: MySQL, MongoDB
- Version control: Git, GitHub, GitLab
- Monitoring tools: Grafana

PERSONAL PROJECTS

Adversarial Attacks on Autonomous Vehicle Systems (Research)

- Technologies: Python, Machine Learning, Computer Vision, TensorFlow, OpenCV.
- Conducting cutting-edge research on generating adversarial patch attacks for autonomous vehicle systems and creating imperceptible and transferable attacks that can evade detection, particularly in black-box settings.
- This project aims to explore the vulnerabilities of autonomous systems by simulating sensor camera interactions and understanding how these systems process and detect their environment.

Hotel Booking System

- Technologies: Java, Spring Boot, React.js, Tailwind CSS, MySQL, Eureka Server, Grafana.
- This project was built to address the need for a scalable, efficient hotel booking system that can handle room management, booking reservations, and user authentication.
- The goal was to create a microservice-based application that could easily scale to handle increasing traffic while providing a seamless experience for both users and administrators.
- The system features services for managing room availability, bookings, and user authentication, along with real-time monitoring for performance and system health.
- Source code: https://github.com/MilanWeerasinghe/hotel_management_backend

Blog Application (Ongoing)

- Technologies: React, Tailwind CSS, Node.js, Express.js, MongoDB.
- This project was built to provide a robust and scalable platform for users to create, manage, and interact with blog posts.
- Goal was to learn how the MERN stack works together in building full-stack applications, understand and implement CRUD operations using RESTful APIs while working with a non-relational database like MongoDB.
- Source code: https://github.com/MilanWeerasinghe/blogApp

Artist Management System

- Technologies: Java, MySQL.
- The application manages artists, songs, and albums, providing functionalities for adding, updating, and deleting records. Developed using Java, the system integrates a MySQL database for data storage.
- The aim of this project was to deepen my understanding of design patterns, SOLID principles, and OOP concepts. The Singleton pattern was employed to manage a single instance of the database connection, ensuring efficient resource usage.
- Source code: https://github.com/MilanWeerasinghe/MusicApp

Cheer Up Bot - Boredom Detection and Conversational Robot

- Technologies: Python, Gemini API
- This application utilizes facial recognition technology to detect boredom and automatically initiate conversations to engage the user.
- The system was designed to monitor facial expressions and, upon detecting boredom, trigger a dynamic chatbot response.
- Source code: https://github.com/Sayuru-Nimsara/CheerUpBot.

SOFT SKILLS

- Effective Communication
- Team Collaboration
- Problem-Solving
- Leadership skills
- Time Management

EDUCATION

BSc (Hons) in Computer Science **2021 - Present**

University of Sri Jayewardenepura

- Currently in final year pursuing a Bachelor's degree specializing in Computer Science with a 3.3 GPA.
- The first two years focused on Computer Science, Mathematics, and Applied Mathematics.

G.C.E Advanced Level **2017 - 2019**

Dharmasoka college, Ambalangoda

- Completed Advanced Level examination in the physical stream.
- Achieved a C pass in Combined Mathematics, a B pass in Chemistry, and a B pass in Physics.

CERTIFICATIONS

- Machine Learning in Production (Coursera): https://shorturl.at/P7Vxh
- Supervised Machine Learning (Coursera) : https://shorturl.at/0zxW4
- JavaScript intermediate (Sololearn): https://shorturl.at/5Nvgs

REFERENCES

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