

# Sudharaka Fernando

## Software Engineer

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### PROFESSIONAL SUMMARY

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Software Engineer with 2 years of industry experience and 4 years of freelancing experience. Proficient in **Java, Spring Boot, JPA, Hibernate** technologies and developing **REST APIs** with **Microservices** architecture. Has experience in working with **Azure cloud** and **JavaScript, React, VueJS, HTML5, CSS, SQL** and also **NoSQL** databases. Team player with good **communication** and **leadership** skills. Looking for a position where I can apply my technical skills along with my collaborative skills for development initiatives.

### SKILLS

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**Backend Development:** Java, Spring Boot, Python, FastAPI, Pydantic, Golang, R, Object Oriented

**Database:** MySQL, PostgreSQL, Hibernate, JPA, MongoDB, SQLAlchemy, Firebase Firestore

**Frontend Development:** HTML, CSS, JavaScript, React, Vue, Redux, Vuex, Material UI, Bootstrap

**Deployment:** Docker, AWS S3 + CloudFront, GitLab CI/CD, NginX, Digital Ocean, Firebase Hosting, Vercel

### WORK EXPERIENCE

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**Associate Software Engineer | Java, Spring Boot, Postgres, VueJs, Python, FastAPI, Linux, Git, CI/CD**

*Vizuamatrix, Colombo  
Aug 2023 - Dec 2024*

*FRMS - Risk Calculation Process*

- Designed and developed the database (Postgres) architecture and service logic for dynamic Risk ratio calculation process
- Added separate normalized tables to handle complex and simple ratios, integrated Nashorn Engine for expression evaluation in Java
- System was able to handle recursively defined advanced financial ratios in IFRS 9 and produce 100% accurate outputs for tested financial ratios

*FRMS - Service Logic Optimization*

- Optimized service layer logic to handle multiple database intensive api requests
- Examined the service logic and reduced iterative database calls using Java Maps and optimized the data processing using Java Streams
- The most resource intensive service logic was optimized by 38% and overall system efficiency increased 30%

*ECL - User Management*

- Developed the User Management module handling user authentication and authorization
- Used Microsoft Entra ID to handle roles and permissions and integrated with JWT in the backend
- Developed the frontend, handling the permissions returned for the logged in user

**Software Engineer Intern | Java, Spring Boot, VueJs, R, Linux, Git**

*Vizuamatrix, Colombo  
Feb 2023 - Aug 2023*

*ECL - Dynamic Loan Table*

- Developed the loan table with flexible filtration ability with search and sort adding for each table headers
- Designed the frontend table integrating custom CSS to Vuetify library table and designed dynamic query function in the backend to generate the SQL query according to the passed parameters from frontend
- All combined searching and sorting scenarios could be handled from this single endpoint

**Freelance Software Developer | Java, Spring Boot, React, Flutter, Git, Python, Next**

*Jan 2021 - Present*

- Developed backend services in Micro Service architecture, enhancing scalability and performance of distributed systems
- Built responsive web applications with React and Next.js, and mobile apps using Android Studio with Java and Kotlin, as well as cross-platform solutions using Flutter.

- Implemented projects in Python and C++, including machine learning and computer vision applications

## EDUCATION

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### B.Sc. (Hons) in Computer Engineering

Nov 2019 – Jul 2024

Minor Specialization: Data Management

Faculty of Engineering, University of Sri Jayewardenepura

- GPA: 3.6/4.0
- Deans List 2020 - 1st Year 1st Semester & Deans List 2024 - 4th Year 1st Semester

## PROJECTS

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### Mushroom Analyzer

[Backend](#) [Frontend](#)

- Mushroom analyzer is an web application developed for mushroom farmers to handle their operations. It provides the interface to mange their pot stocks, daily mushroom production, operational and capital expenses, income and also it gives the chance to manage and oversee their profits.
- Technologies Used: Java, Spring Boot, Hibernate, JPA, MySQL, React, Material UI

### AeroExpress– Airline Reservation System

[Github](#)

- AeroExpress project is a distributed microservice project designed to handle high traffic volumes for airline operations, enabling users to book and view tickets, check flight schedules, and manage reservations with ease. The backend, built with **Java Spring Boot**, utilizes a load balancer for high availability and reliability, while Spring Security with **JWT** tokens ensures secure authentication and authorization. Each **Microservice** is connected to its own PostgreSQL database, and MongoDB manages media storage. The system uses **Eureka Server** for service registry, and the frontend is developed with **React, Material UI**, and integrated with Axios and TanStack Query for smooth API interactions
- Technologies Used: Java, Springboot, React, JWT, Axios, TanStack, Hibernate, JPA

### Audio to Visual Feedback Converter for Weather News

[Github](#)

- This application is designed to help deaf people understand weather news with visual aid. The application has mainly three visual interfaces. Sign language avatar showing the Sinhala sign language interpretation, weather map which summarizes the weather news and AI generated video according to the weather news. The application was built using **Python** and **Stability AI** used for video generation. After audio was converted in to text using Google Speech API, the news was processed using NLP libraries like **NLTK**. For UI building **PyQt5** was used
- Technologies Used: Python, PyQt5, NLTK, Generative-AI, Stable-Diffusion, Tkinter

### El-Care

[Github](#)

- El-Care is a mobile application designed to assist senior citizens in managing their daily routines with ease. The app provides digital support for medical schedule management, emergency handling, sleep improvement, and connecting with family doctors to share medical information. Developed using Flutter and Dart, it features seamless integration with Firebase for real-time data management and SQLite for local storage. The app is optimized for Android devices, and Hive is used for lightweight data storage and caching.
- Technologies Used: Dart, Flutter, Firebase, SQLite

## CERTIFICATIONS

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AWS Educate Introduction to Cloud 101  
Software Architecture Foundations

AWS Educate  
LinkedIn Learn

## REFERENCES

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### Dr. Udaya Wijenayake

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University of Sri Jayewardenepura, Sri Lanka  
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### Mr. Pramuditha Sirisena

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