PASINDU SULAKSHANA FERNANDO
B.Sc. (Hons) Computer Science(UG) University of Colombo School of Computing

Aspiring Software Engineer with a passion for innovation and a strong foundation in problem-solving. As the top-performing student in my batch, I am eager to contribute to dynamic projects, apply my skills, and grow professionally while delivering impactful solutions.

ACADEMIC QUALIFICATIONS

BSc (Hons) Computer Science (UG)
University of Colombo School of Computing (UCSC) Sri Lanka (May 2021 - Present)
GPA: 3.99 / 4.00 (Top of the batch)

Dip. Computer Hardware and Networking
Vocational Training Center, Dehiwala, Sri Lanka (Feb 2020 – Aug 2020)

Dip. Information Technology
Esoft Metro Campus, Sri Lanka (Feb 2017 – Jul 2017)

PROFESSIONAL QUALIFICATIONS

Software Engineer (Internship)
WSO2 Inc., Sri Lanka
November 2023 – May 2024
- Designed and implemented a Choreo feature to address dependencies in parallel service development, enabling dynamic mock responses for unimplemented services and reducing integration mismatches.
- Developed dynamic response generation using OpenAPI, OpenAI, and Faker; implemented API proxying with Stoplight Prism.
- Designed the Kubernetes architecture to orchestrate scalable deployments, including service skeletons, proxy components, and enhanced API layers, ensuring isolated and consistent environments.
- Built and optimized backend logic with Go and Ballerina, and managed backend data storage using MS SQL.

Researcher
CLOUDNET, UCSC
May 2024 – Present
- Conducting a final-year research project on fault-tolerant live virtual machine (VM) migration, focusing on optimizing system checkpointing mechanisms within QEMU/KVM virtualization environments.
- Advancing a US-patented incremental checkpointing concept by developing fine-grained checkpointing techniques that enhance granularity, reduce redundancy, and improve migration efficiency.
- Designing mechanisms to extract and transfer only modified page contents in successive checkpoint iterations, surpassing traditional page-level granularity for greater precision and resource optimization.
- Achieving a 60-80% reduction in redundant checkpoint data using fine-grained checkpointing mechanisms and advanced compression techniques, maintaining consistent migration times, replication times, and system downtimes.

Teaching Assistant
UCSC, Sri Lanka
Nov 2024 – Present
- Assist in teaching Foundations of Algorithms, providing guidance to undergraduate students in understanding core algorithmic concepts, problem-solving techniques, and data structures.
- Facilitate discussions on algorithm analysis, complexity theory, and optimization techniques, ensuring students grasp theoretical and practical aspects of the subject.

VOLUNTEER EXPERIENCE / COMMITMENTS

Finance Team Member   Aug 2022 - Present
IEEE Student Branch of UCSC, Colombo, Sri Lanka

- Gained experience in budget planning and people handling for events like IEEE day and other events organized by IEEE UCSC.

Faculty Coordinator   May 2022 - May 2023
CSM in University of Colombo, Sri Lanka

- Handled event planning and management in several projects conducted both virtually and physically including charity events, annual carols, sabbath day.

Sports and Recreation Avenue Member   Nov 2022 - Present
Rotaract Club of UCSC, Colombo, Sri Lanka

- Worked for uplifting the sports and recreation aspects of the club members and the Inter-Rotaract club competitions.

TECHNICAL SKILLS

Programming:
- Go | Ballerina | C / C++ | PHP | Spring boot / Java | JavaScript | Python | Scala | Kotlin | R / Octave | Dart | NodeJS / Express

Web Development:
- HTML | CSS | ReactJS

Database:
- MySQL | PostgreSQL | MongoDB | MSSQL

Cloud & DevOps:
- Kubernetes | Docker

Other Skills:
- Git / GitHub | Agile Methods

COMPETITIONS

- MadHack 2024 (Finalist)
- TechTriathlon 2023 (Participant)
- Peo-Code 2022 (Participant)
- ReidXtreme 2022 (Participant)

SPORTS

UOC Tennis Team Member
Emerged as Champions in the 2022 Deuced Inter University Tennis Championship

SOFT SKILLS

- Teamwork and collaboration
- Adaptability
- Continuous learning
- Leadership
- Presentation Skills
- Critical thinking

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LINKEDIN

GITHUB

PORTFOLIO

NOTABLE SOFTWARE PROJECTS

VentureVerse   Jun 2023 – Oct 2023
Entrepreneur and Investor connecting platform

VentureVerse serves as an integrated platform that facilitates obtaining funds for the entrepreneurs who have startups and hope to grow their businesses. The system includes all features with project listings, video conferencing, direct chats, counter proposals and negotiations, document verification, analytics and reports, user management, leaderboards, complains etc.

Accomplishments

- Developed frontend in ReactJS with Tailwind and Material UI components.
- Developed backend with Java Spring boot.
- Designed and developed a database in PostgreSQL for the system.
- Developed listings component with add listings, image/video uploads, listing views, counter proposals, listing finalizations etc.
- Integrated Video Conferencing API to the system to embed video conferencing feature inside the system.
- Got hands on experience with comprehensive documentation and UML diagramming.
- Tested the system using Selenium and User Story based testing.

Sri Care   Jun 2023 - Aug 2023
Customer Care Platform

Sri-Care is an academic project developed to explore microservices architecture and middleware components, aimed at enhancing customer care experiences.

Accomplishments

- Implemented a microservices architecture using Spring Boot and React to simulate a customer care platform.
- Applied a pub-sub messaging model to enable asynchronous communication and improve scalability between services.
- Designed and developed basic RESTful APIs for service communication.
- Integrated middleware components for managing communication between microservices.
- Conducted testing to validate system functionality and communication flow between services.

LIFELINE   Jun 2022 - May 2023
Blood-Banks and Donation Management System

LifeLine is a centralized system which connects blood banks, hospitals / medical centers, campaign organizers and the donors smoothing the process of blood donations, campaign management, staff and inventory management and many more.

Accomplishments

- Developed frontend in HTML / CSS / JS.
- Developed a comprehensive PHP framework compatible for MVC architecture.
- Developed comprehensive graphical reports and filtering options for decision making purposes.
- Developed secure file handling mechanisms to ensure data integrity.
- Got hands on experience with comprehensive documentation and UML diagramming.
- Tested the system using Selenium and User Story based testing.

Care & Cure   Oct 2022 - Dec 2022
Hospital Management System

Developed a MERN stack-based web application for hospital appointment scheduling and staff management. The system enables patients to book appointments with doctors based on available time slots, while hospital staff can efficiently manage doctor schedules, patient appointments, and staff records.

Accomplishments

- Developed the front-end using React to provide a user-friendly interface for patients and staff.
- Built the backend with Node.js and Express, ensuring smooth communication between front-end and database.
- Utilized MongoDB to manage patient, appointment, and staff data.
- Implemented secure user authentication and role-based access for patients and hospital staff.
- Designed a real-time scheduling system, allowing patients to view available time slots and doctors to manage their schedules.

I do hereby declare that all the information and facts furnishes above are true, correct and complete to the best of my belief and knowledge.