Ishanka Perera

Software Engineer

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in **Linkedin**   **Github**   H **HackerRank**

Profile

Motivated IT undergraduate with hands-on experience in full-stack development and a strong academic record. Adept at designing scalable systems, implementing innovative solutions, and delivering user-focused applications. Passionate about learning new technologies and contributing to impactful projects through creativity and collaboration.

Work Experience

SoftwareEngineering Intern | WSO2

Jan 2024 - Jul 2024

- Collaborated with the Digital Transformation Team to design and implement on-premises applications.
- Designed and implemented full-stack solutions ensuring seamless frontend-backend integration.
- Participated in the entire software development lifecycle, from requirement analysis to testing.
- Practised agile methodologies, including standups and code reviews to ensure high-quality deliverables.
- Contributed to technical documentation and worked with the security and compliance team for successful feature delivery.

Education

B.Sc. (Hons) in Information Technology

University of Moratuwa | CGPA - **3.63**

2021 - Present

G.C.E Advanced Level

St/ Mary's Convent, Matara | z-score - 1.89

2017 - 2019

Projects

Visitor Access Control System | Full Stack Developer

Intern Project, WS02

An enterprise-level visitor management system for WSO2's office premises. Designed and implemented both assisted and self-registration applications for visitor access control. Successfully integrated with existing door access infrastructure for RFID-based authentication.

Key Contributions:

- Developed frontend applications using React TypeScript for visitor registration and self-registration flows.
- Implemented RESTful APIs using Ballerina for visitor management and access control.
- Designed MySQL database architecture for efficient visitor data management.
- Integrated with WSO2 Asgardeo for secure authorization.
- Deployed solutions on WSO2 Choreo platform following security guidelines.
- Implemented automated access revocation system using scheduled tasks.

Technologies: **React TypeScript, Ballerina, MySQL, WSO2 Choreo, Asgardeo**

Quixi - Collobarative Money Expense Tracker | Full Stack Developer

Client: LSEG (Pvt) Ltd

A mobile application that streamlines expense sharing and management among groups. Created an intuitive platform for tracking, splitting, and settling shared expenses with secure payment processing capabilities.

Key Contributions:

- Built REST APIs in Node.js for expense creation and deletion.
- Developed React Native screens for adding and managing expenses.
- Created image upload system for expense receipts.
- Designed MongoDB schema for expense data storage.
- Added input validation and error handling for expense operations.

Technologies: **React Native, Node js, MongoDB**

Projects Contd'

Multimodal Singlish Conversational Agent with Cross-Lingual and Image-Based Contextual Understanding

Research Project

A cross-lingual, multimodal conversational agent for Singlish, processing Singlish text and image inputs to generate targeted captions and responses for the automobile sector.

Key Contributions:

- Fine-tuned open-source and proprietary large language models (TinyLLaMA, Gemini Flash) for generating concise Singlish responses from English instruction data.
- Designed and implemented a novel two-stage pipeline to mitigate language bias and improve cross-lingual answer generation.
- Created a custom instruction–input–output dataset for domain-specific fine-tuning in a low-resource language setting.
- Conducted systematic evaluation of model performance using BLEU score, perplexity, and qualitative analysis.
- Explored advanced techniques such as domain adaptation and parameter-efficient fine-tuning (e.g., LoRA) for low-resource scenarios.

Technologies: **TinyLLaMA, Python, Hugging Face Transformers, Gemini Flash**

Employee Management Backend | Backend Developer

Independent Project - Ongoing

An application that manages employee records, enabling CRUD operations with robust validation, error handling, and secure data persistence. Designed to streamline employee data management for organizational use.

Key Contributions:

- Developed REST APIs using Spring Boot to support employee creation, retrieval, update, and deletion.
- Implemented input validation for employee data using Jakarta Validation annotations.
- Created service and repository layers with Spring Data JPA for efficient PostgreSQL database operations.
- Designed PostgreSQL schema for employee data storage with unique constraints and optimized indexes.

Technologies: **Spring Boot, PostgreSQL, Postman**

Skills

C Lang	JavaScript	ReactJS	MongoDB	Choreo	Git	Problem Solving
Java	TypeScript	NextJS	MySQL	Asgardeo	Agile Practices	Critical Thinking
Python	NodeJS	React Native	Ballerina	Spring Boot	PostgreSQL	Teamwork

Certifications

- **Assured Diploma in Information Technology (DITECT)** | Esoft Metro Campus | Issued May 2021
- **Assured Diploma in English (DIE)** | Esoft Metro Campus | Issued October 2020
- **Supervised Machine Learning: Regression and Classification** | DeepLearning.AI | Issued July 2024
- **Advanced Learning Algorithms** | DeepLearning.AI | Issued October 2024
- **Front-End Web Development** | CODL - UOM | Issued February 2023
- **AWS Cloud Technical Essentials** | Coursera | Issued April 2023

Extra Curricular Activites

- **CodeRush 2022 (Coding Competition) -** Participation
- **Code Revivor 2.0 (Coding Competition) -** Participation
- **Trainee at RDB - Pamburana, Matara** - 2020 Oct - 2021 Apr
- **Company Coordinator and Company Calling Member** - Career Fair 2023 - FIT

Referees

Mr. Chanuka Dissanayeka

Senior Technical Lead - WS02 LLC

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Dr. Thilina Thanthriwatta

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