NIMANTHA GAYAN

BSc (Hons) in Software Engineering

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PROFESSIONAL SUMMARY

Proactive Software Engineer and Data Scientist with 2.5+ years of experience building scalable full-stack and ML/AI solutions across production environments. Experienced in developing robust applications using Java Spring Boot, React, TypeScript, and Python, and delivering end-to-end ML workflows from data preprocessing to deployment using TensorFlow, Docker, and AWS CI/CD pipelines. Strong background in designing RESTful APIs, implementing containerized and automated deployment pipelines, and collaborating in Agile teams to deliver high-quality, performance-optimized, and business-aligned solutions.

PROFESSIONAL EXPERIENCE

Software Engineer

Dialog Axiata PLC | January 2025 – Present

- Developed and maintained the admin dashboard for the IdeaBiz platform using React, TypeScript, Redux Toolkit, Axios, and TailwindCSS, ensuring fully responsive UI/UX compatible with dark and light modes, and implementing role-based access control (RBAC) for secure multi-tenant operations.
- Built RESTful APIs with Java Spring Boot, JPA repositories, and MySQL, integrating frontend with backend services while conducting unit tests using Mockito and JUnit to achieve 98% code coverage.
- Collaborated in Agile sprints, contributing to code reviews, CI/CD pipelines with Jenkins and Bitbucket, and on-time feature delivery, supporting data-driven analytics for platform users.

AI-Computer Vision Engineer Trainee

Softvil Technologies | February 2024 – January 2025

- Developed production-grade face recognition system using Python and TensorFlow, optimizing deep learning models (FACENet, VGG16, MobileNet) for high accuracy with minimal data, and deploying via Flask-based APIs for real-time processing.
- Optimized data preprocessing pipelines using Pandas and NumPy, reducing processing time, through efficient vectorization and batch processing techniques

Data Science Intern

MAS Capital (Private) Limited | January 2023 – June 2023

- Automated data processing scripts in Python, integrating with Excel for Power BI, and implementing predictive models to enhance accounts receivable analytics and automate alerts via Microsoft Power Automate.
- Implemented forecasting models (ARIMA, Exponential Smoothing) to predict customer payment behaviors, improving RFM score accuracy by 25%
- Developed Power BI dashboards with DAX queries and automated alert systems using Microsoft Power Automate for real-time business intelligence.

TECHNICAL SKILLS

Programming & Development:

- **Languages**: Python, Java, JavaScript/TypeScript, C, SQL
- **Frontend**: React, Redux Toolkit, Next.js, HTML5, CSS3, TailwindCSS, Bootstrap, Responsive Design
- **Backend**: Java Spring Boot, Flask, FAST API, RESTful APIs, JPA/Hibernate
- **Software Engineering**: OOP (SOLID Principles), Data Structures & Algorithms, Design Patterns, Agile/Scrum, Version Control (Git, GitHub, Bitbucket).

Databases:

- **MySQL**, **PostgreSQL**, **MongoDB**, AstraDB, ChromaDB.

Data Science & Machine Learning:

- **Large Language Models**: LangChain, LLaMA, OpenAI API, Qwen AI.
- Retrieval-Augmented Generation (**RAG**) pipelines
- **Deep Learning**: TensorFlow, PyTorch, CNN, RNN, LSTM, Transformers
- Natural Language Processing (**NLP**)
- **Data Analysis & Preprocessing:** Pandas, NumPy, Matplotlib, Feature Engineering, Data Cleaning

DevOps & Cloud:

- **AWS** (EC2, S3, Lambda), **Docker**, **Jenkins** CI/CD Pipelines, **Git**, Bitbucket, GitHub Actions.

Testing & Quality Assurance:

- JUnit, Mockito, Unit Testing, Postman

KEY PROJECTS

IdeaBiz Platform Admin Dashboard || *React, TypeScript, Redux, Java Spring Boot, MySQL*
- Developed enterprise-grade admin dashboard with complete frontend using React, TypeScript, Redux Toolkit for state management, and TailwindCSS for modern UI design
- Implemented role-based access control (RBAC), dark/light theme switching, and fully responsive design across all device sizes.
- Built RESTful APIs with Java Spring Boot, JPA repositories, and comprehensive unit tests using JUnit and Mockito
- Deployed using Jenkins CI/CD pipeline and bitbucket for version control, currently serving in live production.

Book Library Management System || *Java Spring Boot, MySQL, RESTful API* | GitHub
- Architected full-stack library management system with book booking features using Spring Boot, MySQL, and RESTful APIs
- Implemented comprehensive CRUD operations with date-based availability checks and robust error handling using HTTP status codes
- Utilized JPA/Hibernate for ORM, DTO pattern for data transfer, and documented all endpoints with Postman for scalable API development

Multimodal Sight & Sound AI Agent || *Python, FastAPI, Whisper, BLIP, Groq LLaMA, MLflow* | GitHub
- Built a multimodal AI agent capable of answering user questions based on audio, image, and video inputs using a unified FastAPI backend
- Implemented speech-to-text transcription with Groq Whisper and image captioning using BLIP to extract contextual information
- Logged inference runs using MLflow for experiment tracking, including inputs, outputs, and contextual metadata.

Real-time Yoga Pose Estimation System (Research) || *Python, Flask, CNN, MediaPipe* | GitHub
- Developed real-time CNN-based system for Tadasana pose alignment feedback using MediaPipe pose estimation
- Created web application with Flask for live video processing and real-time pose correction feedback
- Published research abstract at 8th International Research Conference, Uva Wellassa University

Production-Ready E-commerce Chatbot || *Python, Flask, LangChain, AWS* | GitHub
- Built intelligent chatbot using Flask and LangChain for personalized product recommendations and customer inquiries
- Implemented RAG pipeline with OpenAI embeddings and AstraDB vector store for contextual information retrieval
- Deployed containerized application on AWS EC2 with automated CI/CD pipeline using Docker for seamless updates

EDUCATION

Bachelor of Science (Honours) in Software Engineering

University of Kelaniya | 2020 – 2024 | **GPA: 3.55/4.0**

G.C.E. Advanced Level (2018): Combined Mathematics - A, Physics - B, Chemistry – B

ACHIEVEMENTS & LEADERSHIP

- Published Research: CNN-powered pose estimation systems at international conference.
- 4th Place, Junior Hackathon 2021 - Developed data-driven solution for real-world problem
- Organizing Committee, RealHack 3.0, 4.0, 5.0 - Software Engineering Students Association
- Committee Member, IEEE Student Branch, University of Kelaniya (2022–2024)

References

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