Dilshan Arachchige

Software Engineer Undergraduate

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Professional Summary

Motivated Software Engineering undergraduate with hands-on experience in building scalable full-stack and backend systems using modern technologies including JavaScript, Node.js, Express.js, Python, FastAPI, and Firebase. Experienced in designing RESTful APIs, implementing secure authentication systems, and developing AI-powered applications using LLMs and Retrieval-Augmented Generation (RAG). Strong problem-solving skills with a passion for building efficient, maintainable, and production-ready software. Seeking an internship or entry-level software engineering role.

Technical Skills

- JavaScript
- Python
- FastAPI
- Java
- React Native
- React
- Next.js
- Node.js
- Express.js
- HTML

- REST APIs
- JWT
- Firebase
- MySQL
- PostgreSQL
- Supabase
- AWS
- MongoDB
- DSA
- OOP

- Git
- GitHub
- Agile
- Docker
- Linux
- LLMs
- LangChain
- Figma
- AdobeXD

Projects

DocMind – AI-Powered Document Question Answering RAG System ([GitHub](#))
- Developed an AI-based system that allows users to upload documents and ask questions using natural language
- Built backend REST APIs using **FastAPI** for document ingestion, processing, and querying
- Integrated **Ollama** to run **LLaMA 3.2** locally for large language model inference
- Implemented **LangChain** for document loading, chunking, embedding, and prompt orchestration
- Designed a **Retrieval-Augmented Generation (RAG)** pipeline for accurate, context-aware responses
- Stored and retrieved vector embeddings using **ChromaDB** for semantic search
- Implemented document preprocessing, chunking, and metadata handling
- Optimized query flow to reduce latency and improve response relevance
- Added structured request validation and error handling for reliable API responses

CloudPDF – Cloud-Based PDF Toolkit ([Git Repo](#) | [Live Demo](#))
- Developed a full-stack web application for **PDF conversion and document management**
- Built a modern, responsive frontend using **Next.js and Tailwind CSS** for seamless user experience
- Designed and implemented backend REST APIs using **FastAPI** with **Uvicorn ASGI server**
- Implemented document conversion features to convert **Word, Excel, and PowerPoint files into PDF format**
- Developed core PDF functionalities including **merge, split, compress, and password-protect PDF files**
- Used **PyPDF2 and PyMuPDF** for PDF manipulation and processing
- Integrated **pdf2image and Pillow** for PDF-to-image conversion and image handling
- Implemented secure file uploads using **python-multipart** with validation via **Pydantic models**
- Enabled cross-origin requests using **Flask-CORS** for frontend-backend communication
- Applied error handling and input validation to ensure secure and reliable file processing

QuantifyPro – Invoice & Quotation Management System ([Git Repo](#))

- Developed a full-stack web application for creating and managing invoices and quotations
- Built a responsive and user-friendly frontend using **Next.js (TypeScript) and Tailwind CSS**
- Designed and implemented backend REST APIs using **Node.js and Express.js**
- Implemented **role-based access control (RBAC)** with Super Admin and User roles
- Developed secure authentication and authorization mechanisms
- Integrated **Firebase** for real-time database operations and user management
- Implemented protected routes to restrict admin-only features
- Applied form validation, error handling, and data consistency checks

RemoveBG – AI-Powered Image Background Removal
Web Application (GitHub | Demo)

- Developed a full-stack web application to allow users to **upload images and remove backgrounds instantly** using AI-powered processing
- Implemented responsive UI/UX with Next.js (TypeScript) and Tailwind CSS for seamless interaction across devices
- Built backend REST APIs using **FastAPI** with **Uvicorn** ASGI server to handle image upload, processing, and response delivery
- Integrated the **rembg** Python library to perform image background removal with high precision
- Implemented secure file upload handling, error feedback, and real-time preview of original and processed images
- Used **Axios** for frontend–backend communication with efficient API request handling
- Deployed the application on **Railway** for live testing and access

UnseenGallery.com – Full-Stack Image Gallery Web Application (GitHub | Demo)

- Built a responsive and visually appealing user interface using Next.js (TypeScript) and Tailwind CSS
- Developed backend REST APIs using **Node.js and Express.js** to handle image requests, caching, and routing
- Integrated the Unsplash **API** to dynamically fetch and display high-quality images
- Designed intuitive gallery layouts with smooth navigation and user-friendly interactions
- Implemented responsive grid systems and adaptive layouts for different screen sizes
- Optimized image loading and rendering for better performance and user experience
- Applied clean component-based architecture for scalable and maintainable UI code

Education

HND In Cybersecurity (OTHM Level 5)

Summerset College, Sri Lanka   **2026 – Present**

BSc (Hons) Software Engineering

The Open University of Sri Lanka   **2023 – Present**

Certifications

Foundation: Introduction to LangChain – Python (Feb 2026)
Credential ID - 8j52sivty7

Python Data Structure – Sololearn (Jan 2026)
Credential ID – 639032095713774630

JavaScript Intermediate – Sololearn (Jan 2024)
Credential ID - CC-GE5FW3VL

Python Basic – HackerRank (Nov 2023)
Credential ID - 64491c681396

API Testing with Postman Tool – Coursera (Dec 2023)
Credential ID - ZT6VJUMS6QLK

Python for Beginners - University of Moratuwa (2023)
Credential ID - O8IRxRGbLN

Soft Skills

Strong problem-solving mindset, Collaborative team player, Clear technical communication, Fast learner, Detail-oriented