

# Dilshan Arachchige

Software Engineer Undergraduate

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## Professional Summary

Software Engineering undergraduate with hands-on experience in **designing, developing, and deploying scalable software applications** through academic and project-based work. Strong foundation in the **software development life cycle (SDLC)**, backend systems, **API design**, authentication, and modern application architecture. Demonstrates **analytical thinking**, problem-solving ability, and a commitment to writing **clean, maintainable, and efficient code**. Experienced in collaborating on team projects and adapting to new technologies to build functional and user-friendly solutions.

## Education

### HND In Cybersecurity (OTHM Level 5)

Summerset Campus, Sri Lanka

2026 – Present

### BSc (Hons) Software Engineering

The Open University of Sri Lanka

2023 – Present

## Technical Skills

- **Languages:** Python, JavaScript (ES6+), TypeScript, Java, HTML5, CSS3
- **Frameworks & Libraries:** FastAPI, Node.js, Express.js, React, React Native, Next.js, LangChain
- **Databases:** MongoDB, PostgreSQL, MySQL, Firebase, Supabase
- **Cloud & DevOps:** AWS (basics), Docker
- **AI & Data:** LLM Integration, RAG Systems, Vector Databases (ChromaDB)
- **Tools:** Git, GitHub, Postman
- **Concepts:** OOP, Data Structures & Algorithms, MVC Architecture, RESTful APIs

## Technical Skills

### DocMind – AI-Powered Document Q&A System (RAG) ([GitHub](#))

- Built an AI-powered document question-answering system using **Retrieval-Augmented Generation (RAG)**
- Developed backend **APIs** using **FastAPI** for document upload, processing, and querying
- Integrated **LLaMA 3.2** (via Ollama) for local **LLM** inference
- Implemented **LangChain** for document chunking, embeddings, and prompt orchestration
- Used **ChromaDB** for vector storage and semantic search
- Optimized query pipeline for low-latency and context-aware responses
- **Tech:** Python, FastAPI, LangChain, ChromaDB, LLMs, REST APIs

### CloudPDF – Cloud-Based PDF Management Platform ([GitHub](#) | [Demo](#))

- Developed a **full-stack web application** for PDF conversion and document management
- Built responsive **frontend using Next.js (TypeScript) and Tailwind CSS**
- Designed backend services with **FastAPI** for file processing and conversion
- Implemented PDF features: merge, split, compress, password protection
- Integrated libraries including PyPDF2 and PyMuPDF
- Deployed application for live usage and testing
- **Tech:** Next.js, TypeScript, FastAPI, Python, Tailwind CSS

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

- Developed a **full-stack** invoice and quotation management system
- Built frontend using **Next.js (TypeScript)** and **Tailwind CSS**
- Implemented **backend APIs using Node.js and Express.js**
- Designed **Role-Based Access Control (RBAC)** with Admin and User roles
- Integrated Firebase for **authentication** and real-time database operations
- Implemented secure authentication and protected routes
- **Tech:** Next.js, Node.js, Express.js, Firebase, REST APIs

### RemoveBG – AI Image Background Removal Application ([GitHub](#))

- Developed an AI-powered web application for automatic image background removal
- Built responsive **UI using Next.js (TypeScript)**
- Developed **backend using FastAPI** for image processing
- Integrated rembg library for **AI-based background removal**
- Implemented secure file uploads and error handling
- Deployed application for live testing
- **Tech:** Next.js, FastAPI, Python, REST APIs

### UnseenGallery – Full-Stack Image Gallery Application ([GitHub](#))

- Developed a responsive image gallery using **Next.js (TypeScript)**
- Built **backend services with Node.js and Express.js**
- Integrated Unsplash **API** for dynamic image fetching
- Optimized image loading for performance and scalability
- Applied component-based architecture for maintainable code
- **Tech:** Next.js, Node.js, Express.js, REST APIs

## Certifications

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### Foundation: Introduction to LangChain – Python

Issued: February 2026

Credential ID - 8j52sivty7

### Python Data Structures – Sololearn

Issued: January 2026

Credential ID: 639032095713774630

### JavaScript Intermediate – Sololearn

Issued: January 2024

Credential ID: CC-GE5FW3VL

### Python (Basic) – HackerRank

Issued: November 2023

Credential ID: 64491c681396

### API Testing with Postman – Coursera

Issued: December 2023

Credential ID: ZT6VJUMS6QLK

## Soft Skills

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

