

DINAL UDAGEDARA

Software Engineer | Full Stack & Web3 Developer

BEng (Hons) Software Engineering — University of Westminster

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PROFILE

Results-driven Software Engineer with approximately 2 years of professional experience, including an 11-month industrial placement and promotion to a full-time role. Holds a BEng (Hons) in Software Engineering (First Class Honours) from the University of Westminster. Specializes in full-stack development, Web3 integration, and AI-driven platforms. Experienced in building and integrating smart contract-backed systems, developing scalable RESTful APIs, and leading end-to-end feature delivery. Currently engaged as the primary software engineer for a US-based AI music generation and streaming startup.

WORK EXPERIENCE

Software Engineer • Perfectus Technologies

May 2025 – Present

Perfectus

- Promoted to Software Engineer after a successful 11-month internship, reflecting strong technical contributions and growth.
- Develop and maintain full-stack web applications using modern frameworks across both frontend and backend layers.
- Integrate smart contracts into web platforms, connecting decentralized on-chain logic with traditional Web2 backends and frontends (Web3 integration without smart contract authoring).
- Architect and implement RESTful APIs and backend services to support scalable, production-grade applications.
- Collaborate in an agile team environment, participating in code reviews, sprint planning, and feature delivery.

Software Engineering Intern • Perfectus Technologies

May 2024 – April 2025 (11 months)

- Completed an 11-month industrial placement as part of the BEng (Hons) Software Engineering programme at IIT.
- Contributed to full-stack development across multiple client projects, gaining hands-on experience in production environments.
- Worked on Web3-enabled web applications involving smart contract integration on the frontend and backend.
- Collaborated with senior engineers to deliver features, fix bugs, and improve code quality across the codebase.

Freelance Software Engineer • Independent — US Client (Remote)

2025 – Present

- Serving as the primary software engineer for a US-based AI music generation and streaming platform.
- Leading end-to-end feature development across the full stack, from backend APIs to frontend user interfaces.
- Working directly with the client to define technical requirements, architect solutions, and deliver production-ready code.
- Building and integrating AI-powered music generation capabilities into a scalable streaming platform.

TECHNICAL SKILLS

Programming Languages: JavaScript, TypeScript, Python, Kotlin, Java

Frontend: React, Next.js, HTML, CSS

Backend: Node.js, Express.js, NestJS, FastAPI

Database: MongoDB, PostgreSQL, SQL

Mobile Development: Android Jetpack, Kotlin

Web3 / Blockchain: Smart Contract Integration, Web3.js / Ethers.js

Cloud & DevOps: AWS (EC2, S3, Lambda — working knowledge), Docker (working knowledge), Git, GitHub, Postman, VS Code, Figma

AI / LLM: Prompt Engineering, RAG Systems (LangChain, OpenAI Embeddings), AI Agent Design (PydanticAI, Gemini 2.5 Flash); multi-model workflows across OpenAI and Gemini in production systems

AI Dev Tools: Cursor, Claude, OpenAI Codex

EDUCATION

Informatics Institute of Technology (University of Westminster, UK)

BEng (Hons) Software Engineering with Industrial Placement, First Class Honours

2023 – 2026 | Awarded 12 June 2026

Includes 11-month industrial placement at Perfectus Technologies.

St. Joseph Vaz College, Wennapuwa

Advanced Level — Physical Science Stream | Completed 2022

- Completed A/L examinations in the Physical Science Stream
- Served as a School Prefect

PROJECTS

CrackInt – AI-Driven Personalized Interview Preparation Platform 2025 – 2026

Final Year Project | crackint.dinaludagedara.com | [GitHub \(Frontend\)](#) | [GitHub \(Backend\)](#)

- Full-stack AI interview preparation platform built with Next.js and FastAPI, backed by PostgreSQL with modular API routing.
- Designed and trained a Word2Vec + BiLSTM + CRF NLP pipeline for Named Entity Recognition (NER) over résumé and job-posting text, achieving a test micro-F1 of 0.83 on 4,738 annotated résumés and ~0.85 on 6,327 job postings.
- Platform features AI tutor chat, targeted interview question practice, skill gap analysis, readiness scoring, and tailored cover letter generation.
- LLM-enabled features are controlled through configuration flags for reliable deployment flexibility.
- Fully deployed and live at crackint.dinaludagedara.com.

Omi Card Game – Real-time Multiplayer Card Game 2024 – 2025

omi.dinaludagedara.com | [GitHub](#)

- Personal hobby project — a digital implementation of Omi, a popular Sri Lankan trick-taking card game, built during the internship period.
- Built with Next.js 14, TypeScript, Tailwind CSS, and Convex for a real-time reactive multiplayer backend.
- Supports practice mode against AI opponents (fully client-side) and online multiplayer with public and private rooms for up to 4 players.
- Includes auto-playing bot fallback when a player disconnects mid-game, with seamless rejoin capability.

Sri Grow – Agricultural Advisory Platform for Rural Sri Lanka (Group) 2024

sri-grow.vercel.app | [GitHub](#)

- Full-stack agricultural advisory web app targeting rural agricultural officers in Sri Lanka, supporting crop planning, pest alerts, and market price tracking.
- Trained a Random Forest Regressor on a custom Sri Lanka weather dataset to predict maximum precipitation by city and date range, enabling data-driven crop scheduling.

- Served the ML model as a Python Flask microservice alongside a Node.js/Express backend and React frontend — a 3-tier architecture with separate ML inference layer.
- Features include live weather forecasting, crop-specific soil and weather guidance, real-time pest alerts, and current market prices sourced from structured datasets.

Tasker – All-in-One Productivity & Collaboration Platform 2024 – 2025

tasker-ten-omega.vercel.app | [GitHub](#)

- Full-stack productivity platform built with Next.js 14, TypeScript, Tailwind CSS, and Convex for real-time data sync.
- Features note-taking, task management, project planning, and real-time team collaboration in a single unified workspace.
- Implements authentication via Clerk and uses shadcn/ui for a polished, accessible component system.
- Deployed on Vercel with a responsive UI designed for both personal and team workflows.

srt-lyric-player – Spotify-Style Lyrics Player & npm Package 2025

srt-to-lyrics-ebon.vercel.app | [npm](#) | [GitHub](#)

- Built a Spotify-style music player with real-time synchronized lyrics driven by standard .srt subtitle files, and published the result as the srt-lyric-player npm package.
- Engineered real-time lyric sync using Howler.js for audio playback, Framer Motion for lyric transition animations, and Web Audio API for a canvas-based audio visualizer.
- Structured as a Next.js 15 monorepo with the package bundled via tsup (ESM + CJS + TypeScript types) and deployed live on Vercel as an interactive demo.

CERTIFICATES & ACHIEVEMENTS

- Benchmark 2.0 UI/UX | TOP 10 Finalist
- Completed British Council's COL Skills Plus 2 Certification
- Completed ESOFTE Diploma in Information Technology (DiTEC)
- Blogs about my software engineering journey on [Medium \(medium.com/@dinal.bandara\)](https://medium.com/@dinal.bandara)

EXTRA CURRICULAR ACTIVITIES

- IEEE SIGHT Volunteering
- Represented School Chess Team
- Represented School Badminton Team

REFERENCES

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