Tanzim Bin Zahir

Software Engineer | Full-Stack Developer | AI Engineer

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PROFESSIONAL SUMMARY

Software engineer with nearly two years of experience building and supporting production business systems, real-time control software and AI-enabled applications. Current work includes end-to-end ERP development, finance workflows, APIs, production debugging, automated testing and connected-device integrations using Python, TypeScript, React/Next.js, NestJS/FastAPI and PostgreSQL. Currently pursuing an MPhil in Engineering at APU.

TECHNICAL SKILLS

Programming: Python, TypeScript, JavaScript, SQL
Frontend & Mobile: React, Next.js, React Native, Expo, PWA, HTML/CSS
Backend & Databases: NestJS, Node.js, FastAPI, Express.js, PostgreSQL, Prisma, MySQL, REST APIs, WebSockets
AI & Computer Vision: OpenAI API, LangChain, PyTorch, OpenCV, Ollama, MCP, OCR/Tesseract
Cloud, DevOps & Device Integration: Microsoft Azure, Docker, NGINX, Linux, systemd, Git/GitHub, Vercel, Raspberry Pi, OSC/UDP, Wake-on-LAN, RS-232

PROFESSIONAL EXPERIENCE

AI & Software Developer

Nextrend System Sdn Bhd | Kuala Lumpur, Malaysia | Sep 2025 - Present

- Designed and developed the company's internal management system from scratch for 20+ staff, covering quotations, pricing, inventory, projects, invoicing, HR and payroll.
- Implemented finance and operations features with NestJS, PostgreSQL and Prisma, including payment reconciliation, live currency conversion, stock tracking, approvals, role-based access, notifications and OCR.
- Created a Raspberry Pi 5 AV-control web app for Movie, Karaoke, DJ and music modes, with real-time control of the mixer, streamer and amplifier using React, FastAPI and WebSockets.
- Resolved production issues across the frontend, backend and database, and added regression tests to prevent repeat failures.
- Prototyped a voice-controlled showroom demo and a PyTorch/OpenCV product-recognition workflow for AV demonstrations.

AI & Software Development Industrial Trainee

SquareCloud (Malaysia) Sdn Bhd | Kuala Lumpur, Malaysia | Sep 2024 - May 2025

- Developed chatbot features with LangChain and the OpenAI API, plus a React Native mobile app using Whisper for speech-to-text and text-to-speech.
- Automated inventory data entry with a Python/Tesseract OCR tool that extracts item details from documents.
- Created a real-time energy-monitoring dashboard for live operational and engineering metrics.

EDUCATION

Master of Philosophy (MPhil) in Engineering

Asia Pacific University of Technology & Innovation (APU), Malaysia | Feb 2026 - Expected 2028

BSc (Hons.) Computer Science (Artificial Intelligence)

Taylor's University & University of the West of England | Malaysia | Graduated Aug 2025

SELECTED PROJECTS

TruckTalk Connect

TypeScript | Node.js | Vercel | Google Apps Script | Google Sheets | OpenAI API | GitHub | Demo

- Developed a Google Sheets add-on and Vercel API for logistics teams to clean and validate load data. It maps inconsistent column names and shows proposed fixes before users apply them.
- Added date and Malaysian phone normalization, status mapping, missing Load ID generation, company-specific rules, HMAC request checks, rate limiting and 50+ automated tests.

MEVA - Medical Evidence Verification Agent

Python | FHIR | Ollama | MCP | Streamlit | GitHub | Live Demo

- Developed an open-source tool that checks whether AI-generated medical-record claims are supported by retrieved synthetic FHIR records using deterministic Python rules.
- Integrated local Ollama models, MCP tools and reproducible Synthea data, with a Streamlit demo and repeatable benchmark workflow. The project uses synthetic patient records only.

Citizen - Civic Services App

React Native | Expo | TypeScript | Expo Router | GitHub

- Designed a React Native and Expo prototype that helps users find and understand public services by task instead of requiring them to know which department provides the service.
- Created iOS and Android flows for service search, requirements, fees, a demo credential wallet, application activity and low-data settings. The prototype currently uses local mock data.

CERTIFICATIONS

- Microsoft Azure AI Fundamentals
- IBM Python for Data Science
- Meta Full-Stack Development Professional Certificate
- TensorFlow Developer Certificate - Google

REFERENCES

References and recommendations available upon request.