

# DESMOND CHOW

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## PROFESSIONAL EXPERIENCE

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### Freelance Web Developer

May 2024 - Present

- Built and shipped full-stack web solutions across multiple clients, from headless CMS-powered agency portfolios to full ERP spa management systems, owning the entire lifecycle from requirements scoping and architecture through to production deployment
- Consulted clients on IT strategy and business workflows, translating operational requirements into web solutions optimised for SEO and GEO, performance, and conversion-driven UI/UX
- Managed client communication, project timelines, and concurrent delivery while coordinating a developer team and translating business requirements into working products on schedule

## PROJECTS

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### TeamSync – AI-Powered Client Portal with Automation for Dev Teams (<https://github.com/desraymondz/TeamSync>)

- Architected an end-to-end LLM automation pipeline triggered by GitHub webhooks, feeding commit context into an AI summariser that generates structured video scripts and PDF progress reports
- Built automated video generation using OpenAI TTS for narration and FFmpeg for rendering, producing shareable client update videos without manual effort
- Integrated Puppeteer for headless browser automation, enabling programmatic screenshot capture and structured PDF report generation at scale

### NutritionLM – AI-Powered Nutrition Companion for Smarter Eating (<https://github.com/desraymondz/NutritionLM>)

- Secured 1st Place by engineering food logging and nutrition detection using the Google Gemini AI SDK with LLM-structured outputs to convert unstructured meal inputs into precise nutritional data, eliminating manual tracking
- Designed the PostgreSQL schema on Supabase and built server-action APIs covering user onboarding, preference management, food logging, and analytics, supporting a scalable multi-feature platform
- Implemented Google OAuth via Supabase Auth and applied prompt engineering safety guardrails to ensure responsible, user-safe AI behaviour across all dietary interactions

### Batam1Spa – Full-Stack ERP Spa Management Web App

- Developed RESTful APIs with Spring Boot for staff, service, and package management; built a customer-facing booking site with real-time availability checking to streamline scheduling
- Designed a role-based admin panel with multi-level access control and dynamic scheduling, managing client relations to ensure on-time delivery aligned with business requirements

### EDA – Indonesia's Inflation and Investor Benchmark Analysis (<https://eda-indonesia-macro.vercel.app/>)

- Aggregated and cleaned multi-source financial datasets (World Bank API and exchange rate CSVs) across 5 currencies over 23 years using Pandas, ensuring consistency and reproducibility
- Built interactive visualisations with Matplotlib and Plotly and derived a benchmark ROI model to help Indonesian retail investors outperform combined inflation and currency devaluation

## EDUCATION

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### University of London – Singapore Institute of Management

Sep 2023 - Sep 2026

*Bachelor of Science in Computer Science (Machine Learning and AI)*

- **Academic Standing:** On track for First Class Honours (Current Average: 81.94% | GPA: 4.0/4.0)
- **Scholarship:** Recipient of the SIM Academic Excellence and Leadership Scholarship 2025

## CCA & LEADERSHIP EXPERIENCE

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### Technical Director – SIM IT Club

May 2025 - Present

- Plan and execute a 5-month web development curriculum, training members from frontend fundamentals to full-featured apps with React, Next.js, and Vercel deployment
- Lead technical strategy and manage internal web projects, coordinating subcommittee members to ensure timely, quality delivery
- Oversee technology infrastructure and project workflows, maintaining quality output and smooth operations
- Mentor subcommittees on coding best practices, project implementation, and problem-solving

## SKILLS

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- **Software Development:** JavaScript, Typescript, Java, PHP, C++, React, Next.js, Payload, Vite, Node.js, Express, Spring Boot, WordPress, Tailwind CSS, React Native, Expo, Docker, AWS, Google Cloud, Firebase, Supabase, MySQL, PostgreSQL
- **Machine Learning & AI:** Python, NumPy, Pandas, Matplotlib, Plotly, RAG, Agentic AI
- **Language:** English, Bahasa Indonesia, Chinese