

Elgen Mar Arinasa

Full-Stack Software Engineer & Systems Architect

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Education

University of San Carlos – Talamban Campus

Bachelor of Science in Computer Science

Cebu City, PH

Expected May 2026

- Core Coursework: Data Structures & Algorithms, Systems Analysis and Design, Software Architecture.
- Additional Coursework: Software Architecture, Mobile Development, Networking II, Computer Organization (Assembly), Technopreneurship.
- Academic Distinctions: DataCamp Scholar (GDGOC-USC); Coursera Scholar (DTI × Google GCC); **TOPCIT Level 3**.

Professional Experience & Core Systems

Elgen's OS – Sovereign Workspace

Lead Systems Architect (Next.js, Node.js, AI Agents, Vercel)

Cebu City, PH

2026 – Present

- Architected a sovereign, IDE-native operating system layer that composes **Next.js**, **Vercel**, and persistent AI agents into a live workspace.
- Engineered session memory and tool-orchestration loops that convert ordinary development sessions into compound, stateful workflows.
- Shipped the public portfolio and monitoring surface so the system reads as a recruiter-facing product, not a local-only experiment.

FreshCatch – B2B Seafood Coordination Platform

Award-Winning Project (HackUSC 2026) – Lead Systems Architect (Next.js, Supabase)

Cebu City, PH

2026 – Present

- Built a **Cebu-first B2B seafood platform** for a fragmented, **multi-million-peso** local trade where buyers and fishermen still rely on manual coordination and exploitative middlemen.
- Engineered the **Bayanihan Aggregation Engine** to bundle small-catch supply into wholesale blocks; 10,000+ lines of custom code validated through direct dock-side sessions with the **Pasil Market Manager**.
- Implemented a defensible **5% buyer-side coordination fee** and **post-landing weight adjustment** logic to handle real-world supply fluctuations and secure recurring revenue.

Automated Malaria Detection System

Undergraduate Thesis – ML Systems Engineer

Cebu City, PH

2024 – Present

- Engineered an end-to-end computer vision pipeline combining **YOLOv11** and stacked CNNs for real-time RBC localization.
- Achieved a benchmark-clearing **90%+ classification accuracy** verified against rigorous clinical dataset constraints.
- Integrated **Grad-CAM** decision-mapping algorithms to visually unpack and explain neural-net pathways to medical stakeholders.

Livingston Research

Contract Software Engineer & Technical Researcher (Remote)

London, United Kingdom

Sep 2024 – Mar 2025

- Delivered highly technical programming and data-processing solutions for **35+ projects** under extreme deadlines.
- Generated over **P50,000+ (\$1,000+)** in delivered contract value within a high-velocity **4-week sprint**.
- Boosted aggregate delivery efficiency by **30%** by architecting reusable, modular codebase templates for subsequent clients.

Julie's POS System (Enterprise Extension)

Project Lead – Full-Stack Developer

Cebu City, PH

2022 – 2025

- Led a cross-functional agile team of **5 engineers** across multiple semesters to architect a production-simulated retail POS.
- Engineered backend transaction logic scaling to handle **500+ mock daily operations** with zero downtime.
- Reduced simulated manual bakery operations by **40%+** through automated inventory tracking and role-based access control (RBAC).

Leadership

Data Science Officer

Google Developer Groups on Campus (GDGOC) – USC

Cebu City, PH

Jan 2026 – May 2026

- Directed data science workshops and technical sessions for **300+** students per term while supporting a **3,500+**-follower GDGOC Facebook community.

Technical Skills

Languages: TypeScript, JavaScript, Python, SQL, C, Java, Kotlin

Frontend & Frameworks: React, Next.js, Tailwind CSS, Framer Motion, Android SDK

Backend & Cloud: Node.js, Express.js, Supabase (PostgreSQL), Firebase, Vercel, Git/GitHub

AI, ML & Data: AI Agents, Prompt Engineering, YOLOv11, Pandas, NumPy, Grad-CAM, EDA