

EUGENE CARL C. DELA CRUZ

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EXPERIENCE

MAPUA MAKATI LIBRARY – Makati, Philippines

Lead Developer

Dec 2025 – March 2026

- Designed and built a full-stack desktop application using Next.js, TypeScript, and Electron, packaged as a standalone Windows installer with no internet dependency, serving 26 workstations across the library computer lab.
- Implemented real-time PC workstation tracking with color-coded availability states, automated student login/logout session recording, and a violation enforcement system with tiered penalties (warnings, 1-week suspensions, term bans) enforced programmatically.
- Built an admin dashboard with usage analytics, session logs, CSV/XLSX report generation (including a legacy format matching the library's prior manual log-sheets), and role-based access control for librarian and non-librarian staff accounts.
- Integrated automated email notifications via SMTP (Outlook) for violation alerts, lost item notices, and student communications, alongside a post-session feedback collection system with configurable mandatory/optional enforcement.
- Replaced a fully paper-based, spreadsheet-dependent attendance and computer usage logging process eliminating manual session duration calculations, tracking errors, and administrative overhead
- Designed a drag-and-drop PC layout editor with snap-to-grid and smart guides, and a configurable policy editor, enabling library staff to manage the lab environment without requiring technical knowledge

PROJECTS

MAPUA UNIVERSITY – Makati, Philippines

Solo and Group Projects

July 2023 – Present

MAPUA LIBRARY COMPUTER LAB ACCESS SYSTEM | Next.js · TypeScript · Electron · SQLite · SMTP

- Offline desktop kiosk application deployed at the Mapua University Library replacing a fully manual, paper-based computer lab tracking process. Features real-time workstation monitoring, automated session tracking, tiered violation enforcement, drag-and-drop layout editor, and multi-format usage report generation. packaged as a standalone Windows installer with no internet dependency.

INSIGHTA: NON-LIFE INSURANCE AI COMPLAINT TICKETING SYSTEM | TypeScript · React · Next.js · Supabase · PostgreSQL

- Web-based complaint management platform developed for Malayan Insurance Philippines. Converts customer submissions into trackable support tickets with AI-powered NLP and sentiment analysis for automatic categorization and urgency prioritization. Includes role-based access, staff ticket workspace with escalation workflows, automated email notifications, and an admin analytics dashboard for complaint trend reporting.

EC TRIVIA — REAL-TIME MULTIPLAYER TRIVIA GAME | Android · Kafka · WebSocket · Spring Boot

- Kahoot-inspired Android trivia game built for real-time multiplayer quiz sessions. Utilized Apache Kafka for event decoupling across game services and WebSocket for live player synchronization. Ensuring simultaneous question delivery, countdowns, and leaderboard updates across all connected players.

EDUCATION

MAPUA UNIVERSITY – Makati, Philippines

Bachelor of Science, Computer Science

July 2023 – Present

ADDITIONAL

Technical: Python, Typescript, Java, C++, Springboot, React, SQL, Git, Docker

Languages: Fluent in English, Filipino