

# DARWIN NIFRAS

Full-Stack / Systems Developer • Offline-First & Operations Software

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## SUMMARY

Full-stack developer specializing in **offline-first systems for high-stakes, low-connectivity environments** — government disaster response, local-government operations, and small-business tools. I build type-safe full-stack applications (Next.js, tRPC, Prisma) and offline-capable PWAs (IndexedDB/Dexie.js) end to end, from data architecture to deployment. As a PDRRMO intern I shipped a provincial disaster-reporting system spanning **all 43 municipalities of Iloilo Province** that earned a government-approved pilot budget. BS Information Systems graduate, West Visayas State University.

## EDUCATION

**West Visayas State University** — College of ICT, La Paz, Iloilo City 2026  
Bachelor of Science in Information Systems — Major in Business Application and Development

**Iloilo National High School** — HUMSS Strand, With Honors 2022

## WORK EXPERIENCE

**PDRRMO Iloilo Province** — Software Developer Intern Jan – Apr 2026

- Sole developer of **DRRM-ERS**, an **offline-first disaster-reporting system** digitizing the NDRRMC SitRep workflow across **all 43 municipalities** of Iloilo Province (486-hour internship).
- Engineered a **type-safe full-stack** application (**Next.js, tRPC, Prisma, Supabase/PostgreSQL**), modeling the 21 NDRRMC report annexes in a 30+ table schema with **versioned, non-destructive** report history for accountability.
- Built an **offline submission queue** (Dexie.js/IndexedDB) with a sync **debounce + lock mechanism** that eliminated a data-duplication bug under rapid connect/disconnect cycles in the field.
- Enforced **authorization at the API layer** with per-municipality data isolation; presented live to the PDRRMO head and division chiefs and earned an **approved budget for a 5-municipality pilot deployment**.

**Freelance Software Developer** — Self-Employed 2024 – Present

- **Rogers Manokan (Aklan)** — Commissioned a **poultry distribution & reconciliation system** (Next.js, Supabase/PostgreSQL) with **immutable transaction history enforced by database triggers** and a sealed daily-closure workflow with a full reopen audit trail.
- **Cry of Jelicuon** — Contracted to build a **45-lesson interactive physics e-learning platform** (Next.js, React, animated SVG) mapped to 15 DepEd competency codes; a **data-driven JSON architecture** lets non-technical authors edit curriculum without touching code.
- Deliver client builds end to end — requirements, architecture, implementation, and deployment on Vercel.

## PROJECTS

**LOTIS — Disaster-Risk GIS Platform** (Undergraduate Thesis) 2024

- Web-based **GIS platform mapping vulnerable populations (PWDs)** for emergency response; deployed as a prototype to two Iloilo municipalities with **above-average acceptability scores** from MDRRMO evaluators.
- Built Leaflet map visualization, **hierarchical household→family→individual** data modeling, and **PII-compliant role-based access**; integrated KoboToolbox, weather, and SMS APIs.
- **Tech:** React (Vite), Leaflet, GeoJSON, Firebase, MongoDB Atlas, JavaScript

**Cathy CCRMS — Offline-First Rental PWA** 2025

- **Mobile-first, offline-capable PWA** managing 20 condo/parking units with **IndexedDB (Dexie.js) as the source of truth** — fully functional with no signal.
- Designed a **deterministic payment-allocation engine** from an authoritative spec so every balance is **auditable and explainable**; deposits isolated from rent, payments applied oldest-period-first.
- **Tech:** React, Next.js, Dexie.js/IndexedDB, Service Workers, Firebase, TypeScript

## TECHNICAL SKILLS

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**Languages:** TypeScript, JavaScript, Python, PHP, Dart, C++

**Frontend:** React, Next.js, Tailwind CSS, Progressive Web Apps (PWA)

**Backend & Data:** Node.js, tRPC, Prisma, PostgreSQL, Supabase, Firebase, MySQL, IndexedDB (Dexie.js), MongoDB Atlas

**Mapping & GIS:** Leaflet, GeoJSON, QGIS

**Automation:** n8n, Make, Zapier

**Design & Tools:** Figma, Adobe Photoshop/Illustrator, UI/UX, Git/GitHub, VS Code, Cursor, Vercel

## ADDITIONAL

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**Leadership:** Citizen Advancement Training (CAT) Officer, Curriculum Officer, and Student Council — West Visayas State University

**Languages:** English, Filipino, Hiligaynon