Arielito Robles Manoriña

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Portfolio: aryelll.me   **LinkedIn:** linkedin.com/in/arielitomanorina   **GitHub:** github.com/Arieellls

TECHNOLOGIES

- **Languages:** TypeScript, JavaScript, Visual Basic, PostgreSQL, MongoDB
- **Technologies:** ReactJS, NextJS, React Native, NodeJS, TailwindCSS, StyledComponents, Supabase, Drizzle, Xata, Sass

EXPERIENCE

Software Developer and Researcher | DOST-PCIEERD Funded Project
UP Diliman NEC Smart METRO | August 2025 – May 2026

- Engineered **map-driven bounding box queries** for interactive pan/zoom operations, reducing redundant API requests by **~80%** and significantly improving geospatial data retrieval performance.
- Architected a **scalable geospatial analytics dashboard** enabling interactive visualization of multi-domain spatial datasets, supporting insights for health services, tourism, disaster risk management, and urban mobility.
- Designed a **modular frontend architecture for map layers, legends, and spatial overlays**, improving maintainability and enabling efficient rendering of large-scale geospatial datasets.
- Conducted applied research on geospatial data processing and visualization techniques, contributing to system design decisions and optimizing performance for large-scale spatial analytics.

Freelance Software Developer
Remote | Jan 2024 – May 2025

- Engineered full-stack web and mobile applications using **React, Next.js, React Native, Node.js, and PostgreSQL**, delivering scalable solutions aligned with client requirements.
- Translated business requirements into **technical architectures and application features**, collaborating directly with clients throughout development cycles.
- Integrated **third-party APIs, authentication systems, and cloud services** to enhance application functionality and security.

Research Project | Drone-Based Real Time Detection of Potential Mosquito Breeding Sites
Iba, Zambales | August 2024 – May 2025

- Developed an **Android mobile application using Kotlin and TensorFlow Lite** to perform real-time object detection of mosquito breeding environments.
- Trained a **custom 7-class computer vision model on a dataset of ~3.9k images**, applying **transfer learning, data augmentation, and experiment tracking with Weights & Biases.**
- Implemented a real-time detection pipeline including frame preprocessing, model inference, and bounding box visualization for live classification overlays.

IT Intern | PRMSU Director for Instruction Office
Iba, Zambales | June 2024 – August 2024

- Supported institutional documentation through **multimedia production and digital content management** using Adobe Premiere Pro, Photoshop, and Canva.
- Automated repetitive **data extraction and web scraping tasks using Python and Selenium**, improving internal workflow efficiency.
- Assisted in office technical tasks including **data management, content editing, and automation support**.

EDUCATION

Cum Laude | Bachelor of Science in Computer Science
Iba, Zambales | President Ramon Magsaysay State University | September 2021 – July 2025

SELECTED PERSONAL PROJECTS

Barangay Management System | Full Stack Developer | GitHub URL | Live URL
Built a full-stack document processing system with role-based access control, real-time request tracking, and automated document generation using Next.js and Xata.

Sari-Track | Full Stack Developer | GitHub URL | Live URL
A Progressive Web Application for Smarter, Faster, and Effortless Inventory Management.