

# Whilmar M. Bitoco

Tagum City, Philippines | [whlmrbitoco@gmail.com](mailto:whlmrbitoco@gmail.com) | [LinkedIn](#) | [Portfolio](#) | [Github](#)

Software Engineer with hands-on experience building full-stack web and mobile applications, integrating applied AI features, and delivering cloud-ready systems. Strong foundation in real-time systems, performance optimization, and end-to-end product development through project-based and freelance work.

## EXPERIENCE

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### Software Engineer (Contract/Prototype)

Davao Region, Philippines | Oct 2025 – Dec 2025

- Designed and built a full-stack on-demand service platform using Flutter (mobile) and Next.js + Supabase (web/backend).
- Implemented core systems including user management, service matching, transactions, and real-time updates.
- Managed end-to-end deployment pipelines, ensuring parity between local development and cloud staging environments.

### Freelance Full-Stack Web Developer (Part-Time)

Remote | Dec 2023 – Present

- Developed and maintained custom full-stack applications for diverse clients using Next.js, Node.js, and PostgreSQL.
- Optimized database performance by refactoring inefficient queries and implementing B-tree indexing and Redis caching, resulting in measurable latency reduction for high-traffic endpoints.
- Built and integrated custom Shopify themes and third-party APIs, focusing on modular code architecture and reusable UI components.

## PROJECTS

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### TaskTap - On-Demand Micro-Task Platform

Flutter, Postgis, Supabase

- Designed a mobile-first marketplace using PostGIS for geospatial indexing, achieving optimized geospatial queries using PostGIS indexes for low-latency coordinate lookups.
- Implemented real-time state management via Supabase Realtime (WebSockets), eliminating the need for client-side polling and reducing redundant API traffic.

### HRMS Microservices – Human Resource Management System

Flask, React (Vite), PostgreSQL, RabbitMQ, Docker, NGINX

- Developed a containerized ecosystem of 4 independent microservices, utilizing RabbitMQ for asynchronous event brokering to manage state propagation across service boundaries.
- Orchestrated deployment using Docker Compose and NGINX, optimizing service startup sequences and ensuring process isolation across the stack.

### GreenBridge - AI-Powered Logistics Route Optimization Platform

Next.js, Supabase, Tensorflow/Keras, OpenStreetMap, Socket.io, OpenAI

- Optimized computation logic to reduce route generation time from ~20 minutes (brute-force) to under 2 minutes via heuristic-based search and spatial indexing.
- Integrated an LSTM-based model to analyze historical traffic data, providing dynamic path adjustments based on predicted congestion.

## AWARDS AND PARTICIPATION

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### AI Hackathon Participant (by DICE & ICT Davao)

Davao City | 2025

- Directed the technical architecture of a real-time, on-demand service marketplace prototype, focusing on the logic for dynamic user-matching and geospatial filtering.

### Kickstart Amixtra Hackathon Participant (by Amixtra)

Davao City | 2025

- Led the engineering of an AI-driven logistics platform designed for route optimization using OpenStreetMap data and predictive modeling.

## EDUCATION

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Aces Tagum College Inc. - Tagum City, Philippines

### Bachelor of Science in Information Technology

Relevant Coursework: Software Engineering, Database Administration, Data Structures & Algorithms, Object-Oriented Programming, Web Development, Distributed Systems

Languages: JavaScript (ES6+), TypeScript, Python, Java, Bash, React, Next.js, Tailwind CSS, Node.js (Express), Laravel, Flask, TensorFlow/Keras, PostgreSQL, MySQL, Supabase, NeonDB, MongoDB, Docker, Git/GitHub, CI/CD, Linux