

MARYNELLE ABAN

BACKEND SOFTWARE ENGINEER

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PROJECT EXPERIENCE

Smrtvlt — Lead Backend Engineer & Embedded Engineer (Team of 3)

Dec 2025 - Mar 2026

A secure, multi-layered vault management system with real-time biometric authentication, PIN-based access control, and embedded microcontroller firmware.

- **Real-Time Hardware Integration:** Implemented an asynchronous WebSocket layer for bi-directional communication between hardware vaults and the backend, enabling real-time status updates and remote unlocking.
- **Production Observability Stack:** Integrated Prometheus, Grafana, and Sentry for business metrics, security dashboards, and PII-protected error tracking.
- **Automated CI/CD Pipeline:** GitHub Actions pipeline running Alembic migrations and 120+ unit and integration tests on every push.

Repository: github.com/XpnsiveSharks/smartvault-backend

GearFalcon API — Lead Backend Developer (Team of 2)

Sept 2025 - Nov 2025

A robust service management platform automating workflows between customers, technicians, and administrators. Collaborated on a Next.js/TypeScript frontend integrated with the PHP backend.

- **Advanced RBAC:** Designed a Role-Based Access Control model managing granular permissions across three user tiers (Admin, Customer, Technician).
- **Quote & Job Lifecycle Engine:** Built core business logic automating service request transitions — from quote generation through technician assignment to final completion.
- **Database Engineering:** Designed and optimized a MySQL relational schema for multi-tenant data, handling complex relationships between service catalogs, user profiles, and audit-logged job histories.

Repository: github.com/XpnsiveSharks/gearfalcon-api

SKILLS

LANGUAGES: Python, PHP, C#, C, SQL, Bash

FRAMEWORKS & LIBRARIES: FastAPI, .NET Core, ReactJS, NestJS

DATABASES & CACHING: PostgreSQL, MySQL, MsSql, SQLite, Redis, MongoDB

ARCHITECTURE & DESIGN: Clean Architecture, DDD, MVC, SOLID, Repository Pattern, RBAC, Event-Driven Design, Adapter Pattern

DEVOPS & TOOLS: Docker, GitHub Actions (CI/CD), Git, Composer, Makefile, BitBucket

OBSERVABILITY Prometheus, Grafana, Sentry, Datadog

EDUCATION

University of Caloocan City

Expected Graduation: **2027**

Bachelor of Science in Computer Science

ACHIEVEMENTS

1st Place, C# .NET Category — CSD Interskills, University of Caloocan City

2025