

# MICHAEL JAMES CARNAJE

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## EDUCATION

### Mindanao State University – Iligan Institute of Technology

Bachelor of Science in Computer Science

Iligan City, Philippines

Aug. 2021 – June 2025

## TECHNICAL SKILLS

**Languages:** TypeScript, JavaScript, Python

**Frontend:** HTML5, CSS3, Tailwind CSS, Sass, React, Vite, Next.js, React Native, Expo, TanStack Query, Zustand, Tamagui, shadcn/ui, Radix UI, Recharts

**Backend:** Node.js, Express, NestJS, Flask, Django, GraphQL, Firebase, Supabase, Socket.IO, BullMQ, Mongoose, Passport

**Databases:** MongoDB, MySQL, PostgreSQL, SQL, Redis

**Tools:** Git, Docker, Stripe, Twilio, Resend, RxDB, AWS S3, Cloudinary, OpenAI SDK, Google Generative AI, Puppeteer, SQLAlchemy, Alembic, Pillow

## EXPERIENCE

### Geriatric Care Solution

Jan. 2024 – May 2024

Remote, California, USA

Full-Stack Web Developer

- Independently architected and developed 3 enterprise-scale full-stack applications using **Next.js, React Native**, dual AI integration (**OpenAI GPT-4, Google Generative AI**), and **Stripe** payment processing
- Engineered **Anaya Care** - enterprise-grade monorepo with **NestJS backend (30+ modules)**, **React Native mobile (72 screens)**, and **Next.js web (94+ dashboard pages)** featuring 9 specialized AI services, dual **Socket.IO** gateways, and **BullMQ + Redis** background processing
- Built comprehensive mobile app with 6 role-based interfaces, GPS-tracked time clock, real-time messaging, and HIPAA-compliant document management (Lockare) with advanced shift scheduling using RRule patterns
- Implemented real-time collaborative features across web and mobile platforms with **Socket.IO**, modern state management using **TanStack Query** and **Zustand**, and automated AI-powered care planning across 9 health domains
- Built scalable subscription-based digital asset platforms (**Care Prints, For Little Readers**) with watermarking protection, secure content delivery, and integrated **Twilio SMS** and **Resend** email services across all applications

### BuildMyWealth

Jan. 2022 – Present

Remote, Las Piñas, PH

Lead Mobile Developer & Co-Founder

- Co-founded fintech startup focused on personal financial management; led mobile development using **React Native** and **Expo**
- Architected offline-first data sync with **RxDB**, achieving seamless local persistence and conflict resolution on reconnect

### Creating Info

Oct. 2023 – Apr. 2024

Remote

Mobile Developer (Contract)

- Developed 3 React Native applications: warehouse management system, EasyBrand cooking platform, and geo-based promotional notification app
- Implemented offline caching of data and images across all applications, ensuring seamless user experience in low-connectivity environments

### Vashcorp Inc.

Jan. 2023 – July 2023

Remote, Quezon City, PH

Front-End Web Developer

- Developed two high-performance websites with **Next.js**, applying modern best practices for SEO and accessibility

### Freelance Web & Mobile Developer

Sep. 2021 – Oct. 2022

Iligan City, PH

Self-Employed

- Developed full-stack solutions for academic thesis projects using MERN stack and React Native
- Created a crypto accounting front-end and TikTok analytics dashboard, enhancing data visualization for end users

### Sunnyside

Feb. 2021 – June 2021

Remote, Iligan City, PH

Mobile Developer

- Built two React Native apps: a financial management tool and a warehouse inventory system, collaborating in a two-person team

## PROJECTS

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### **Welicious Inventory & Analytics System** | *Flask, MySQL, React 19, SQLAlchemy, TanStack Query*

- Architected full-stack open-source inventory management system for small food businesses with **Flask** REST API (10 modular blueprints), **MySQL** database, and **React 19 + TypeScript** dashboard with real-time analytics
- Engineered comprehensive POS system with automatic stock updates, multi-payment method tracking, product variants (size/flavor combinations), add-ons system, and customer relationship management with credit limit monitoring
- Designed database schema with **SQLAlchemy** ORM and **Alembic** migrations featuring 12+ interconnected tables for sales tracking, expense management, and customer analytics with optimized relationship mapping
- Built business intelligence dashboard with **Recharts** visualizations, revenue forecasting, category breakdowns, and automated image optimization pipeline using **Pillow** for product catalog management

### **Anaya Care Backend Architecture** | *NestJS, Passport, BullMQ, Redis, AWS S3, Expo Push*

- Architected scalable backend with 30+ **NestJS** modules using event-driven architecture with EventEmitter2 for cross-module communication and dependency injection patterns
- Designed background job processing system with **BullMQ** and **Redis** queues (notification, shift generation, AI processing, email) with retry logic and Bull Board monitoring dashboard
- Implemented multi-method authentication with **Passport** strategies (JWT, Local, Phone OTP via Twilio) and hierarchical role-based access control across 6 user roles
- Integrated **AWS S3** with presigned URLs for secure file uploads, **Expo Push Notifications** for mobile alerts, and comprehensive API error handling with global exception filters

### **Geriatric Care Solution** | *MongoDB Aggregation, OpenAI, Google AI, Puppeteer, Cloudinary*

- Independently architected and developed 3 enterprise-scale full-stack applications using **Next.js, React Native**, dual AI integration (**OpenAI GPT-4, Google Generative AI**), and **Stripe** payment processing
- Engineered **Anaya Care** - enterprise-grade monorepo with **NestJS backend (30+ modules)**, **React Native mobile (72 screens)**, and **Next.js web (94+ dashboard pages)** featuring 9 specialized AI services, dual **Socket.IO** gateways, and **BullMQ + Redis** background processing
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### **BuildMyWealth - A budget tracking app** | *React Native, Expo, RxDB, CouchDB, CRDT*

- Co-founded fintech startup focused on personal financial management; led mobile development using **React Native** and **Expo**
- Architected offline-first data sync with **RxDB**, achieving seamless local persistence and conflict resolution on reconnect