





Emmanuel Delacruz Malagamba

Full-Stack Software Developer

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PROFESSIONAL EXPERIENCE

Freelance Full-Stack Developer

June, 2025 – July, 2025

- Continue maintaining and enhancing POS system with feature updates and bug fixes.
- Collaborate with lead developer on code reviews and system improvements.
- Support ongoing development using MERN stack technologies.

Kave Guild: Your Web3 Ally,

January, 2025 – May, 2025

Full-Stack Developer Intern

- Delivered a functional POS system by contributing to the full-stack development using the MERN stack with integrated inventory tracking.
- Ensured seamless user experience across devices by implementing responsive designs.
- Collaborated in Agile Scrum environment with 4-member team, participating in daily standups and sprint planning

EXPERIENCE

Thesis Researcher, Full-Stack Developer

January, 2024 – November, 2024

- Empowered farmers through a cross-platform app for pest identification and yield forecasting using CNN TensorFlow/Keras and OpenCV.
- Achieved **96.5% accuracy** in pest classification using custom-trained machine learning model.
- Ensured iterative progress and risk mitigation by applying the Agile Spiral model.

ACHIEVEMENTS & COMPETITIONS

CODE FEST: STI-College General Santos

March, 2024

- Led front-end development in 6-hour coding challenge with 3-person team
- Developed Java-based hotel reservation mobile application
- Demonstrated rapid prototyping and teamwork skills under pressure

PROJECTS

AI-Refine

April, 2025

- Built responsive web application using Next.js and PocketBase for CNN model training enhancement
- Implemented drag-and-drop functionality with real-time image processing (*flip, grayscale, blur, brightness*)
- Improved CNN model performance through systematic data augmentation.

Harvest-Assistant

October, 2024

- Developed a mobile application to support **grain farmers** in General Santos City through **AI-powered pest identification, insecticide recommendations, and harvest forecasting**.
- Implemented **CNN-based image recognition** with TensorFlow/Keras and OpenCV for pest detection.
- Designed modules for **income estimation, pest activity by season, and FAQ support** to assist both new and experienced farmers.
- Integrated an **admin web panel** for user management, pest reporting, and harvest comparison.
- Conducted **alpha and beta testing** with local farmers; feedback highlighted strong adoption for pest ID and calendar-based yield planning, with training recommended to improve digital literacy.

Thesis Library Portal, Contributor

July, 2025

- Enhanced UI performance and responsiveness across multiple device formats
- Refactored architecture, reducing file complexity and improving maintainability

Appliance Shop E-commerce Website,

May, 2025

Contributor 

- Integrated sales forecasting using **Facebook Prophet** and displayed results through interactive front-end visualizations.
- Built interactive analytics dashboard displaying sales trends and customer insights
- Built RESTful API with complete CRUD operations and secure authentication, enabling seamless and reliable data flow between front-end and back-end.

TECHNICAL SKILLS

Programming Languages

- JavaScript & Python

Full-Stack Development

Building and deploying complete web applications using modern technologies. Skilled in developing responsive frontends with **React.js, Next.js, Tailwind CSS**, and implementing secure backend services with **Node.js, Express.js, JWT, and RESTful APIs**. Experienced with both relational (**MySQL**) and non-relational (**MongoDB**) databases to support scalable applications.

Frontend Development

Designing and developing interactive user interfaces with a strong focus on usability and responsiveness. Proficient in modern frameworks and tools to deliver optimized and mobile-friendly web experiences, including **parallax effects** and cross-device support.

Backend Development

Creating reliable, secure, and efficient server-side logic with **Node.js** and **Express.js**. Experienced in building **RESTful APIs**, handling authentication with **JWT**, and managing complex data with **Mongoose** for **MongoDB**.

Mobile Development

Developing cross-platform mobile applications with **React Native**, enabling consistent performance across both Android and iOS devices.

Version Control & Collaboration

Proficient in **Git** for source code management, branching strategies, and collaborative development using GitHub.

EDUCATION

Bachelor of Science in Computer Science,
STI-College of General Santos City
General Weighted Average | (GWA) 1.75

September, 2021 – June, 2025

Science, Technology, Engineering, and Mathematics,
Notre Dame-Siena College of General Santos City

June, 2019 – 2021