

Marlon Martin

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Portfolio: decimomartin.vercel.app GitHub: github.com/decimozs LinkedIn: linkedin.com/in/decimomartin

Projects

Binspire TypeScript, Python, Raspberry Pi 4, PostgreSQL, AWS, HiveMQ, Nginx, Hono – Live URL	October 2023
- Engineered an IoT-enabled waste management system for Arcovia City that provides real-time trash bin monitoring, live tracking of collection activities, object detection, and QR-code based collection verification using Raspberry Pi, HC-SR04 sensors, MQTT, and WebSocket optimizing collection routes, reducing operational costs, and improving environmental sustainability.	
Hiraya TypeScript, Lexical Analysis, AST, Syntax Parsing, Compiler Design	December 2024
- Designed and implemented a Filipino-inspired programming language to explore language design, syntax parsing, and compiler construction, demonstrating solid expertise in compiler architecture, abstract machine design, and programming language theory.	
Predicting Carbon Monoxide Levels Python, UCI, Pandas, NumPy, Matplotlib, Seaborn, Scikit-learn	July 2024
- Developed a machine learning-powered CO prediction system that analyzes environmental sensor data to forecast carbon monoxide levels with high accuracy, enabling improved real-time air quality monitoring and supporting data-driven public health decision-making.	
ART Java, DSA, Time Complexity Analysis, Benchmarking, CLI	September 2023
- Implemented execution time measurement, profiling and efficiency analysis to evaluate algorithmic complexity in practice.	
Decimo AI JavaScript, React, Vite, Express, Node.js, OpenAI	January 2023
- Built an interactive conversational AI solution, integrating OpenAI's LLM with a React frontend and Node.js/Express.js backend to facilitate dynamic and natural language user interactions.	

Skills

Languages: C++, Java, Python, Go, JavaScript, TypeScript, PHP, SQL

Libraries & Frameworks: Express.js, Hono.js, Node.js, FastAPI, Flask, Drizzle ORM, Prisma, tRPC

Data & Machine Learning: Pandas, NumPy, Matplotlib, Seaborn, Scikit-learn, OpenAI

Tools & Platforms: AWS, Digital Ocean, Git, GitHub, Linux, Bun, Firebase, MySQL, PostgreSQL, HiveMQ, Docker, Neovim, Raspberry Pi 4, Nginx

Experience

14th IT Skills Olympics Participant (Team Leader)	November 2025
- Led the Binspire project, an IoT-enabled waste management system , which won 1st Runner-Up at the 14th IT Skills Olympics , demonstrating real-time data monitoring, route optimization, and backend scalability.	
Software Developer Freelance – Remote	June 2024 – Present
- Designed and implemented secure server-side RBAC middleware, enabling dynamic permission validation and improving backend authorization reliability across multiple services.	
- Developed and deployed a scalable e-commerce platform with TypeScript, Next.js, and Supabase, focusing on API design, database modeling, and performant server-side operations.	
- Built a disaster management system for a local Barangay using native PHP, optimizing backend data processing, incident logging, and emergency response workflows.	
CCS Academic Competition Participant	February 2023
- Solved 3 out of 4 problem sets in my university Java programming contest during the first year.	
Open-Source Developer & Contributor	January 2023 – Present
- Contributed to multiple community-driven projects on GitHub, enhancing open-source software.	

Education

Pamantasan ng Lungsod ng Pasig	June 2022 – Present
<i>Bachelor of Science in Information Technology</i>	

Coursework: Data Structures & Algorithms, Object-Oriented Programming, Integrative Programming, Database Systems, Discrete Mathematics, Information Security & Assurance, Software Engineering, System Integration and Architecture

Awards:

- President's List Academic Achievement Awardee
- Dean's List Academic Achievement Awardee

Rizal High School

March 2020 – March 2022

Information Communication and Technology - Programming

Awards (Case Study):

- Overall – Best System Presenter
- Overall – Best System Design
- Overall – Best System Functionality
- Overall – Best System