

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	December 2024
- Built a full-stack IoT solution for Arcovia City, utilizing Raspberry Pi and HC-SR04 sensors to track waste levels via MQTT and WebSocket, significantly improving sustainability through data-driven collection scheduling.	
- Revolutionized waste management by optimizing collection routes and reducing operational costs , leading to improved environmental sustainability.	
Hiraya TypeScript, Lexical Analysis, AST, Syntax Parsing, Compiler Design	December 2024
- Designed and implemented a Filipino-inspired programming language to explore core concepts of language design, syntax parsing, and compiler construction.	
- Developed a custom programming language as part of a deep study into programming language fundamentals, showcasing expertise in compiler implementation and abstract machine design.	
Predicting Carbon Monoxide Levels Python, UCI, Pandas, NumPy, Matplotlib, Seaborn, Scikit-learn	July 2024
- Developed a Random Forest model in Python using Scikit-learn , Pandas , and NumPy to accurately predict carbon monoxide levels from environmental sensor data, enhancing real-time air quality monitoring capabilities.	
- Conducted comprehensive data analysis and machine learning modeling, leveraging Matplotlib and Seaborn for visualization, to forecast CO levels, significantly improving prediction accuracy and providing crucial insights for public health initiatives.	
ART Java, DSA, Time Complexity Analysis, Benchmarking, CLI	September 2023
- Developed a command-line interface (CLI) tool for benchmarking and comparing performance of various algorithms.	
- 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
- Developed Decimo AI , a full-stack web application featuring an intelligent chatbot powered by OpenAI's Large Language Model (LLM) , built using React , Node.js , and Express.js for dynamic user conversations.	
- Engineered 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, Git, GitHub, Linux, Bun, Firebase, MySQL, PostgreSQL, HiveMQ, Docker, Neovim, Raspberry Pi 4, Nginx

Experience

Software Developer Freelance – Remote	June 2024 – Present
- Built and deployed a scalable e-commerce platform leveraging TypeScript , Next.js , and Supabase , providing a secure and seamless user experience.	
- Engineered robust Role-Based Access Control (RBAC) by implementing server-side middleware for dynamic permission verification and integrating Drizzle ORM with Supabase for secure, authenticated data management.	
- Developed a disaster management system for a local Barangay using native PHP, streamlining emergency response coordination and community reporting capabilities.	
Open-Source Developer & Contributor	January 2023 - Present
- Contributed to multiple community-driven projects on GitHub, enhancing open-source software.	
CCS Academic Competition Java Programming Participant	February 2023
- Solved 3 out of 4 problem sets in my university Java programming contest during the first year.	

Education

Pamantasan ng Lungsod ng Pasig June 2022 – Present

Bachelor of Science in Information Technology

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):

- 1st Place – Best System Presenter
- 1st Place – Best System Design
- 1st Place – Best System Functionality
- 1st Place – Overall Best System