Mike Joshua M. Lopena

Cebu City, Cebu PH | +639053640929 | mikejoshua.lopena44@gmail.com

TECHNICAL SKILLS

Programming Languages: JavaScript,C ,C++,PHP , Bash Scripting, Node.js, React, MongoDB, MySQL
Embedded Systems: Raspberry Pi, ESP32, Arduino, PCB Design, Serial Communication(RS232/RS485), Power-over-Ethernet (PoE), Sensor Integration.
IoT & Backend Development: WebSocket, REST APIs, MQTT, Apache, Linux Server Configuration
Environment & Tools: Debian, Slackware Git, Github, Vim, Proxmox, Docker, TrueNAS, Home Assistant

WORK EXPERIENCE

USFI Inc.   **Mandaue City, Cebu**
Embedded System Engineer   *Jan 2025 - Jan 2026*

- Developed firmware in C and C++ for microcontrollers and microprocessors, enabling real-time control in embedded applications for automated feed production machinery.
- Designed and prototyped custom PCB layouts for industrial automation, integrating power-over-Ethernet (PoE), serial communication modules (RS232/RS485), and microcontroller units.
- Engineered a distributed control system architecture with multi-node master and slave communication, enabling synchronized servo control and real-time feedback loops.
- Developed systems for real-time data transmission using WebSockets and participated in big data handling for monitoring and analytics.

Geckotech Inc.   **Cebu City, Philippines**
Junior Software Engineer   *Jul 2024 - Jan 2026*

- Maintained a legacy web-based operations platform, optimizing data query performance and system reliability through enhanced scripting and database tuning.
- Designed and deployed an IoT energy monitoring system from hardware integration to backend API development, enabling real-time electricity usage logging and data visualization.
- Implemented an automated cron jobs scheduling, POS and kiosk-mode deployments, and print server configurations via CUPS to improve operational efficiency.

Alphaus Inc.   **Tokyo, Japan**
Internship - Cloud Developer (Virtual)   *Jan 2024 - Mar 2024*

- Developed a robust data ingestion system using Google Cloud Platform tools such as Pub/Sub and Spanner, capable of handling high-throughput data streams with millisecond-level frequency.
- Created and managed Pub/Sub topics and subscriptions, enabling real-time message processing and integration with API webhooks for dynamic data retrieval.
- Gained practical experience in big data handling, ensuring performance, reliability, and scalability in a cloud-native environment.

PROJECT EXPERIENCE

USFI Inc.
Temporary Bin Automated System

- Led the development of a feedback-driven control system for automated refilling and dispensing of 12 distinct materials, significantly accelerating production cycles and boosting overall output capacity.

BISU- MAIN
Reverse Vending Machine for Recycling   *Start Date - Finish Date*

- Developed a reverse vending machine with a reward system to encourage recycling. Utilizing microcotrollers and microprocessors and various sensors to optimize operations and enhance user interaction.

EDUCATION

Bohol Island State University - Main   **Tagbilaran City, Bohol**
Bachelor of Science in Computer Engineering   *Graduation Date: Jun 2024*