

JHOMERSON BELCHEZ

Embedded Systems Engineer

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CAREER SUMMARY

Embedded Systems Engineer with over 7 years of experience in automation, control systems, and real-time data monitoring. Skilled at architecting reliable, scalable solutions from hardware to software with a focus on performance and efficiency. Highly adaptable, detail-oriented, and trusted for solving complex engineering challenges across industries.

EXPERTISE

Embedded Systems | Web Development | PCB Design | Firmware Development | Industrial Automation | SCADA | IOT

TECHNICAL SKILLS

- **Automation | Languages:** C/C++, JavaScript, SQL (MySQL), QCGI (C based interpreter), Python
- **Hardware & Embedded:** PCB Design, Firmware Development, Industrial Protocols (RS485, CAN)
- **IoT & Backend:** Socket Programming (TCP/IP, Unix, WebSockets), API Design, SCADA Systems
- **Environment & Tools:** Linux, RTOS, VIM, SSH, CRON, Chart.js, Git, GitHub

PROFESSIONAL EXPERIENCE

CONSULTANT | Treasure Island Industrial Corp. | Mandaue City, Cebu PH Jan 2024 – Present

- Empowered data-driven operational decisions by developing real-time analytics dashboards to monitor machine utilization and power consumption, directly leading to optimized production workflows.
- Enhanced enterprise-wide inventory management by upgrading legacy sensor systems with a modern SCADA interface and historical data logging, providing critical insights for process optimization.

EMBEDDED SYSTEMS ENGINEER | Upland Stock Feeds Inc. | Mandaue City, Cebu PH Oct 2019 - May 2025

- Drove a 300%+ increase in production efficiency by leading the design and deployment of a full-stack industrial automation system with real-time inventory and manufacturing controls.
- Engineered a near zero-downtime manufacturing operation by architecting a redundant IoT backend API and designing custom industrial control hardware (PCBs/firmware).
- Minimized human error and enabled predictive maintenance by deploying an ML-powered SCADA system, featuring interactive dashboards for real-time power, equipment, and production analytics.
- Scaled team capabilities by mentoring and training junior engineers in core embedded systems development, building a high-performing technical unit and ensuring knowledge continuity.

SOFTWARE ENGINEER | Geckotech Inc. | Cebu City, Cebu PH Jun 2018 - Feb 2022

- Delivered full-cycle development of mission-critical ERP applications (POS, Procurement) for multiple enterprise clients, resulting in long-term system adoption and improved operational efficiency.
- Reduced client capital expenditure by engineering custom PCBs and firmware for IoT automation systems, replacing costly traditional PLCs while boosting production output.
- Secured and delivered a key technology contract, demonstrating comprehensive business acumen from initial bid to successful project deployment and client handover.

SELECTED PROJECTS

INDUSTRIAL PLANT MONITORING AND ANALYTICS USING ML | Embedded Systems Jun 2024 - Apr 2025

- I architected and built an end-to-end monitoring and ML system to filter noise and surface only what matters.
- Laid the foundation for a future zero-downtime environment
- Simplified decision-making through a single-source intelligent alerting system

PRODUCTION AUTOMATION IN MANUFACTURING PLANTS | Embedded Systems Oct 2019 - Feb 2020

- As the sole embedded developer, I designed and delivered a full-stack IoT automation system custom-built from firmware to frontend
- 300% output growth, multi-million pesos profits and cost savings

ENTERPRISE RESOURCE PLANNING (ERP) SYSTEM ARCHITECTURE | Web Development Jun 2018 - Feb 2022

- I took ownership of the ERP system's data and software architecture, focusing on adaptability, clean integrations, and scalability.

EDUCATION

BACHELOR'S DEGREE | Computer Engineering | Bohol Island State University

2012 – 2018