

## Gil Michael E. Regalado

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Iligan City, 9200 Philippines

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*Specializes in Real-time Web, Mobile and Electronics Integration*

## Work Experience

**Company:** High Output

**Address:** Singapore

**Position / Designation:** Software Engineer, Home Based

**Responsibilities:** Designed and implemented NodeJS (Flow Typed) micro-services for Facebook Messenger and Contact Information Management Integration of a CRM Application. Utilized MongoDB and RabbitMQ for the storage and message queuing support. The entire microservice architecture was deployed on top of a dockerized infrastructure in a mix of Amazon, and Digital Ocean Docker Swarm managed using Portainer. Also spearheaded the design of a hybrid Service Bus architecture using Amazon SQS for other 3rd party integrations to maximize service discoverability while ensuring scalability and customizability of the entire application. The whole project was delivered at a rapid pace in an agile environment to validate a startup MVP.

**Period:** April 15, 2017 – Present

**Company:** Emerson Process Management - **PlantWeb** Solutions Group – Manila

**Address:** 19th Floor Cyberscape Alpha Building, Sapphire and Garnet Roads, Ortigas Center, Pasig City

**Position / Designation:** Software Developer

**Responsibilities:** Involved in design and software development of Industrial Internet of Things solutions and Distributed Control Systems product line. Also, actively participated in the quality assurance, performance testing, and compliance testing. Developed MFC C++, C# WinForms and ASP Dot Net Applications.

**Period:** Aug 8, 2016 – March 30, 2017

**Company:** Emerson Process Management - **PlantWeb** Solutions Group – Manila

**Address:** 19th Floor Cyberscape Alpha Building, Sapphire and Garnet Roads, Ortigas Center, Pasig City

**Position / Designation:** Test Automation Engineer

**Responsibilities:** I am tasked to optimize product quality assurance and reduce time to market by designing, developing and implementation of automated test systems for Emerson Process Management hardware and software products. My responsibilities primarily involved automating the software testing of the prototype, in-development, and legacy, products using a variety of tools including, but not limited to Visual Studio CodedUI, MSAA, UIA in C#, and Selenium for Browser Based Products. Also introduced the use of Machine Vision library OpenCV to apply image based verification. I developed the Test Framework and its custom components that will allow other Test Automation Engineers and Test Engineers to decrease time spent implementing tests on Software and Hardware Products.

**Period:** May 28, 2014 – Aug 8, 2016

## Quick Links

<http://gilmichael.regalado.com.ph>

<https://www.youtube.com/bangonkalist>

<https://ph.linkedin.com/in/bangonkali>

<https://github.com/bangonkali/>



**Company:** Embedsourcing

**Address:** Iligan City

**Position / Designation:** (Home Based/ Freelance) Software Developer

**Responsibilities:** I was hired to solve critical system requirements for the company's project involving secure real-time, Linux server administration and geospatial information system support for their web application. I was able to carefully navigate in an environment where most of the people under my supervision were older and had more tenure in the company and still able to deliver in a short period of time a system framework based on Meteor.JS with a clustered MongoDB Database in a Linux environment that could allow the company's developers to develop web-based and real-time discount coupon distribution system catering clients in the USA. I also introduced the company to Git source control versioning system resulting in an increased efficiency in the company's management of their source code.

**Period:** November 2013-February 2014 (freelancing during college)

**Company:** Emerson Process Management - **PlantWeb**

**Address:** One San Miguel Avenue, Pasig City

**Position / Designation:** Intern Test Engineer (On-the-job training)

**Responsibilities:** I had the opportunity to learn on the job supporting the Emerson DeltaV Distributed Control Systems Test Engineering Team. I was tasked to assist in testing a variety of hardware systems including but not limited to DCS, PLC and a variety of Rosemount sensors and their software components. My ability to adapt and learn quickly allowed me to contribute much to the design and implementation of a test rig consisting of multiple DCS, PLC, and Sensors on the very short span of time for my Internship.

**Period:** April 2013-June 2013 (internship during college)

**Company:** Western Cowboy Wear

**Address:** Gallup, New Mexico, United States of America

**Position / Designation:** (Home Based/ Freelance) Server Administrator & IT Consultant

**Responsibilities:** Initially offered consultation services for Development and Implementation of an Online Store with integrated support to hardware point-of-sale systems of the company's retail store and later became Linux Server system administrator and Magento Online Store Web Developer. I was able to offer a highly integrated and automated system reducing man hours spent in synchronizing product quantity and availability with the actual store and the online virtual store by consuming data from point-of-sale systems allowing the company to focus more on the retail activities.

**Period:** October 2009-February 2014 (freelancing during college)

**Company:** CWSD Iligan City

**Address:** Saray, Iligan City

**Position / Designation:** (Home Based/ Freelance) IT Personnel

**Responsibilities:** During the aftermath of the Typhoon Sendong calamity, I was hired to design and implement a data gathering solution to monitor the City's Population and be used as Tracking System of the affected areas of the calamity. In just a span of 3 days, I was required to develop and was able to deliver a web based system which the City Department used for person tracking. The system was able to handle more than a hundred thousand personal data while being used by 7 evacuation

centers scattered around Iligan City all the while delivering real-time statistics to local government officials and other recipients. My efficient coordination with the International Organization on Migration (IOM) and United Nations (UN) representatives during the entire phase of the project was instrumental to the success of the project. I was able to deliver a highly-integrated system resulting to reduced time spent on synchronizing data from different evacuation centers and providing real-time information for the City's decision makers in order to hasten the City's recovery from the aftermath of the storm.

**Period:** December 18, 2011 – March 2012 (freelancing during college)

## Notable Projects

**Title:** Esspresif Based Wireless Controller Integration

**Subject:** Electronics, WiFi, Digital Design

**Description:** A simple proof of concept wireless controller implemented using Arduino Library.

**Video Link:** YouTube <https://goo.gl/N7E4Pu>

**Title:** Overwatch Testing Framework (Emerson FRIS Internal)

**Subject:** OpenCV, Image Analysis, Distributed System

**Description:** A distributed Image Analysis System that exposes OpenCV Library Functionalities to Test Automation Engineers through a C# Nuget that extends traditional text-based verification to cover computer driven image based verification. Image Analysis workers are coded in Python using OpenCV Library which connects to an Erlang-based RabbitMQ Message Queue that distributes work coming from Overwatch C# API Nuget that are used to extend text based CodedUI, UIA, MSAA Automation. Due to the nature of the Framework's architecture, it is scalable by just adding multiple workers.

**Title:** Hybrid FPGA & ARM based solution for Computer Vision (University Thesis)

**Subject:** Microelectronics, VLSI

**Description:** A single Chip solution to a wide array of computer vision problems with a potential support for hardware acceleration. The prominent application is Face Detection for embedded sensor systems or for devices such as Digital Camera, Mobile Phones, and Security Camera. Was later presented to an international conference and awarded College Best Thesis Award.

**Video Link:** <https://goo.gl/aHTYOL>

**Documentation:** <https://github.com/bangonkali/sockitcv>

**Title:** Real-time and Online Data Sensor System (University Thesis)

**Subject:** Electronics, Software Development

**Description:** Developed a novel solution to allowing Sensor data for real-time and web-based consumption using NodeJS and an Arduino Board. The project was noticed by the Arduino Company and the main article is now posted on their blog. The potential application includes real-time monitoring for remote sensor networks.

**Video Link:** <http://goo.gl/jlyWSK>

**Documentation:** <http://goo.gl/eBO828>

**Title:** Power Meter System (University Project)

**Subject:** Electronics, PCB Design, Analog Design

**Description:** Developed a Power Metering System that allows for accurate Energy monitoring for residential power distributors. The project was one of the finalists for 1st PCIEERD Electronics Design Competition and I was awarded Best Presenter Special Award during its presentation at Crowne Plaza Manila Galleria, Ortigas, Quezon City, on March 27, 2014. Awarded best in presentation in the First PCIEERD Electronics Design Competition held by DOST.

**Video Link:** YouTube <https://goo.gl/b0eo0V>

**Documentation:** GitHub <https://goo.gl/wtmloE>

**Featured On:** [PCIEERD DOST News Letter \(Page 7\)](#)

**Title:** NodeJS for Windows (Freelancing work)

**Subject:** Software

**Description:** Developed one of the first Windows-based installers for NodeJS garnering more than 5,000 downloads in a span of 4 months until the company officially received backing from Microsoft to support Windows.

**Documentation:** Google Code <https://goo.gl/horZBF>

**Title:** jVerilog (Hobby)

**Subject:** Electronics, Digital Design

**Description:** A simple UI wrapper for the Windows based port of the Icarus Verilog.

**Video Link:** YouTube <https://goo.gl/mlINbd>

**Documentation:** Github <https://goo.gl/1JHOQ3>

**Title:** Cubbieboard Project (Hobby)

**Subject:** Electronics, Digital Design

**Description:** Multiple projects based on the Chinese Development Board Cubbieboard 2.0. Applications include Computer Vision customizing the Linux Firmware.

**Video Link:** <http://tinyurl.com/cubbieboard>

## Skills

### Software Development

- Experienced in working with software development environments such as Visual Studio C#, C, C++, Python, Java, NodeJS, JavaScript, VB.Net, Swift, Borland Delphi, and Mono for Linux.
- Web Site Development using PHP, NodeJS, HTML, Typescript, JQuery, Angular 2 and MeteorJS
- Mobile Development in native Android, iOS or Hybrid
- Advance level knowledge on Database Systems involving SQL and NoSQL architectures.
- Distributed software development using Microservice or Service Bus architecture with experience in development of applications for Real-time Industrial Monitoring and Chat Messaging Applications and relevant experience using NServiceBus, RabbitMQ, and Amazon SQS.

### Server Management

- Linux, MySQL, Apache, NGinX - Works part time designing and maintaining server systems in both

Linux and Windows platforms for online clients from around the world and also Local Government units.

### Programmable Logic Controller Programming

- With one semester experience, working hands on with S7-200 Siemens PLC devices.

### FPGA Programming

- Altera Cyclone II Starter Development Kit & Altera Arrow SoCKit Hybrid ARM & FPGA Development Board
- Synopsys Verilog Synthesis and Altera Quartus, QSys, ARM SoC EDS

### Microelectronics, Analog and Digital Design

- Familiarity in using Synopsys based tools for Analog and Verilog for Digital Design
- Also familiar with Proteus VSM and EagleCAD PCB Designer
- Familiar with Embedded Electronics Development Platforms such as Platform IO, Arduino, Hi-tech C, Atmel Studio, MPLabX from Microchip.

## Certifications

### Certified Tester Foundation Level in Software Testing

International Software Testing Qualifications Board

### Certified Mobile Applications Professional - Mobile App Testing - Foundation Level iSQI GmbH,

[License 14-CMAPFL-TE-67219-31](#)

### Mechanical Vibration Analyst Category II

Emerson Process Management, [License MHM120954](#)

## Publications

### HNICEM '14 Integration of OpenCV and CycloneV FPGA and ARM SoC for Face Detection Application

7<sup>th</sup> International Conference on Humanoid, Nanotechnology, Information Technology, Communication, and Control, Environment, and Management, November 12-16, 2014, Hotel Centro, Puerto Princesa, Palawan, Philippines

## Education

### Tertiary

[Bachelor of Science in Electronics & Communications Engineering](#)

Mindanao State University - Iligan Institute of Technology (2009 – 2014)

#### Completed 2 Thesis:

1. Integration of OpenCV and CycloneV FPGA and ARM SoC for Face Detection Application (Awarded College Best Thesis, Presented to BS ECE Program)
2. Smart Online & Real-time Energy Monitoring and Control System for Residential Electricity Providers (Awarded Best Presentation on an Electronics Design Competition, BS EE Program)

### Secondary

Philippine Science High School – Central Mindanao Campus (2005 – 2009)

Nangka, Balo-i, Lanao del Norte, Philippines

#### Research work:

A Student Information Management System for PSHS – Central Mindanao Campus

### Elementary

La Salle Academy, Iligan City, Lanao del Norte, Philippines

## Awards/Honors Received

**Title:** Finalist in 1st PCIEERD DOST Electronics Design Competition

**Given by:** Engineer Raul C. Sabularse, Rowena Cristina L. Guevara, PH. D.

**Date Given:** March 27, 2014

**Title:** Special Award for Best Presenter at PCIEERD Electronics Design Competition

**Given by:** Atty. Edgar Allan A. Donasco, Dean of College of Engineering

**Date Given:** April 7, 2014

**Title:** College Best Thesis Award for ECE Program

**Given by:** Atty. Edgar Allan A. Donasco, Dean of College of Engineering

**Date Given:** April 7, 2014

**Title:** DOST SEI Merit-A College of Engineering Scholar

**Given by:** Department of Science and Technology

**Date Given:** SY 2009-2010, SY 2010-2011, SY 2011-2012

## Personal Information

**Date of Birth:** September 16, 1992

**Age:** 23

**Civil Status:** Single

**Citizenship:** Filipino

**Place of Birth:** Iligan City, Lanao del Norte, Philippines

**Father's Name:** Gil Tan Regalado  
Substation Electrical Engineer,  
National Grid Corporation of the Philippines

**Mother's Name:** Victoria Echavez Regalado  
Retired Electronics Technician,  
National Steel Corporation of the Philippines

## Character Reference

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### **Glenn Martinez**

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