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The entire body of human knowledge is a graph and I generally apply [BFS](#) to visit its nodes. Occasionally, when an interest and my capacity to do a deep dive intersect, I use a [DFS](#) approach for as long as I can sustain it or until I reach a leaf node. This is how I ended up writing my own simple compiler, developing an agile plugin, automating my tennis court reservations, as well as receiving an academic excellence award for best strategic plan from the University of the Philippines School of Management. As I traverse this amazing data structure, my guiding principle has and will always be about making myself better at creating and delivering quality software.

Accomplishments

- **Increased Module Accuracy and Speed by at Least 10x** - I offered to re-design and re-implement a cloud computing application's billing module which was producing incomplete results and regularly timing out before it could even display half of an account's report. After I redesigned it, the reports were displayed immediately, and the amounts were 100% accurate.
- **Facilitated Timely Delivery of Software By Automating Requirements** - My employer needed to deliver an autonomous software agent for a customer. I offered to study the associated open standards and proprietary protocols to learn about the complete requirements. I then codified these requirements in an application that developers can execute against their code to give them instant feedback. The application later also served as a regression test harness allowing the team to deliver the software on time and within budget.
- **Reduced a 2-day Manual Process to 5-seconds** - While building the MIS for a metal fabrication shop, I learned about a manual computation process that took shop floor engineers 2 days to complete. After some research and a few questions on a compsci newsgroup, I was able to build a desktop app that reduced the computation time to 5 seconds.
- **Improved Requirements Gathering Through Prototyping** - Upon joining a new software consulting firm, I noticed the long feedback loop from requirements gathering to user testing. I encouraged and guided my teammates to adopt prototyping as one of the ways to improve requirements gathering and reduce waste. The results were positive and the engineers along with the users were very happy with the results.
- **Recipient of Academic Excellence Award for Best Strategic Plan** - I wanted to understand the business of software and decided that focusing on the basics of business management was key. I then applied for our state university's graduate program for management where I was accepted. During the program, I was top of class for Operations Management, Financial Management, and Business Strategy. I then used everything that I learned to create a strategic plan for our family

business which resulted in me getting the strategic plan award.

A Few Open Source Projects

- **Open vSwitch Lab** - A Vagrant project that provisions two machines that talk over a simulated Internet. The lab is a companion project for the series of articles I wrote about [VXLAN](#), [OVSD](#), and [the hardware VTEP schema](#). [Source in Github](#).
- **Aviator** - A lightweight Ruby client library for cloud REST APIs. I initially built this for the OpenStack API. My focus was to build a library that reflected, rather than obscured the underlying API. [Homepage](#).
- **Redmine Backlogs** - Redmine is an open software configuration management application. I built an agile plugin for it called Redmine Backlogs. These days, it is being maintained by a self-managing community at <http://www.redminebacklogs.net> and has also be forked by other projects such as [OpenProject](#).
- **Mana Mana** - A proof-of-concept business natural language testing framework that was inspired by Cucumber and the Robot framework. This was borne of my never-ending search for better ways to write maintainable automated tests. [Source in Github](#).

One More Thing

Coding without tests is like driving a car without seatbelts so I always make sure to cover my code with a reasonable amount of tests. Here's [how I usually set up my Ruby projects](#) and here's [how I used to set up my Python projects](#) (Modified to use py.test and Tox since).

Experience

Software Engineer (2014 - Present)

Nexus IS (A Dimension Data Company), Pleasanton, CA

Nexus is a leading provider of professional, cloud, consulting and managed services for advanced IT solutions. Our team actively contributes to the OpenStack, Open vSwitch, and Open DayLight projects.

- Designed and implemented a framework for managing application lifecycle across cloud providers.
- Designed and implemented a test harness framework used by our testers for our various software products.
- Mentored and brought QA Engineers up to speed on testing our software products using the test harness framework.
- Designed and implemented various client libraries for various cloud APIs.

Senior Director of Engineering (2012 - 2014)

Morph, Manhattan Beach, CA

Morph produced IaaS appliances that its customers can install inside of their data center to use as a springboard for quickly building their own cloud computing environment.

- Designed and developed a billing module for the product.
- Wrote a Ruby client library for the OpenStack API.
- Wrote a Cucumber-based integration test for the QA team.
- Mentored developers on proper software development practices.
- Helped set up the CI tools and process to ensure the main branch always has deployable, stable code.

Software Product Manager (2008 - 2012)

Exist Global, Manila, Philippines

Exist provides tailored solutions, consulting and full cycle IT services to customers around the globe. At the time, I was assigned to Morph to help produce its cloud computing product.

- Oversaw the design and implementation of Morph AppSpace, one of the earliest Platform-as-a-Service providers in the market.
- Managed the product roadmap to ensure that requirements are prioritized properly and that they contain the right information.
- I helped Marketing Communications in their effort to generate product information for various marketing collateral.
- Implemented agile practices in Engineering to ensure timely delivery of stories and an overall coordinated effort of releases.
- Spearheaded the development of Redmine Backlogs (www.redminebacklogs.net). This allowed us to incorporate agile practices into our bug tracker while allowing us to retain control of our data.

Systems Analyst/Programmer (2003 - 2006)

Deco Machine Shop, Davao City, Philippines

Deco Machine Shop, Inc. provides industrial machine fabrication services nationwide. Its major clients include Dole Philippines and San Miguel Corporation. As a systems analyst, my job was to understand the processes of the company and build software tools to automate parts of it. Software tools developed include a gear combination application which reduced a machinist's work from one day to just under 5 seconds while increasing work precision.

Systems Analyst/Programmer (2002 - 2003)

iThink Technologies, Davao City, Philippines

iThink provides business software and training solutions for major companies nationwide. Major clients include the Bangko Sentral ng Pilipinas, Meralco, and Davao Light and Power Company. I was involved as a systems analyst/programmer for the development of purchasing systems, HR systems, and other enterprise applications for iThink's major customers. I also spearheaded the use of the Unified Modeling Language within the company and also provided some in-house training for a number of then upcoming technologies and development platforms.

Web Developer (2001 - 2002)

Smartweb Philippines, Cebu City, Philippines

Smartweb was a US-based company with its production facility based in Cebu. It was involved in developing websites for small to medium sized businesses in the USA. I was a team leader in this organization. Apart from this, I also developed Smartweb's employee time tracking and billing system, which later helped speed up the invoicing and employee time tracking for the company.

Student Volunteer - Web Developer (1997 - 2000)

University of San Carlos, Cebu City, Philippines

While attending college I was also a volunteer of the University of San Carlos Web Development Team which was tasked to build and maintain the university's website. I was involved in the implementation in both the client side and the server side of the website and was later promoted to team leader. The team was, by then, composed of 10 student volunteers.

Education

Master of Management, Technology, Innovation, and Commercialization 2007

The Australian National University

Master of Management 2006

University of the Philippines

BS Computer Engineering 2000

University of San Carlos

Misc.

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