Ngo Duc TRUNG

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Passionate about clean code, programming languages and new technologies.

EMPLOYMENT HISTORY

Software Engineering Internship, iWay Vietnam, October 2014 - January 2014

- ‣ Maintained PHP-based projects
- ‣ Helped implement a Single sign-on solution

EDUCATION

FPT Aptech Hanoi, Fall 2012 - current

- ‣ Majored in Applied Software Engineering, Java and C# desktop and web application development
- ‣ Full scholarship
- ‣ Chosen as the student of the month in March 2013.

Hanoi Foreign Trade University, Fall 2011 - current

Majored in Business Japanese

Hanoi Amsterdam Highschool for the Gifted, Fall 2008 - Spring 2011

Majored in Physics

SKILLS

Programming languages

- ‣ Python: expert
- ‣ C: proficient
- ‣ Ruby: proficient
- ‣ Perl: proficient
- ‣ Java: proficient
- ‣ C++: prior experience
- ‣ Lisp (Scheme, Racket, Clojure): prior experience
- ‣ x86 assembly: prior experience

Proficient with Linux and Unix software development (5+ years)

LANGUAGE PROFICIENCY

Vietnamese

Native

English

Full working proficiency (scored 8.0 on the IELTS test)

PERSONAL PROJECTS AND OPEN-SOURCE CONTRIBUTIONS

Bogo project, Summer 2012 - current

(`https://github.com/bogoengine/bogo-python`)

Bogo is a Vietnamese input method (a program that, given a rule of *a + s -> á*, turns *caos* or *caso* into *cáo*). It has:

- A core library in Python, with several implementations in other languages to assess portability.
- Bridges that interface with Linux (complete), Mac OS X, Windows (had to overcome several problems bridging Python with the Windows API owing to the closed nature of Windows).
- Some other experimental implementations using Finite State Transducers and regular expression to explore support for arbitrary languages (e.g. Hindi).

On the project, I:

- Applied **Test Driven Development** (sometimes coupled with **pair programming**) and **continuous integration** with Travis-CI.
- Tremendously improved the accuracy of the library by introducing a script that exhausts all possible key press combinations that can generate a single Vietnamese word to use as test input.
- Prevented several crashing bugs by regular application of the Clang static code analyzer.
- Improved execution time of a custom C UTF-8 library from *O(n)* to *O(log n)*.
- Built and maintained a Debian package repository and some Arch Linux AUR package build specifications for easy distribution of Bogo. Prior experience with RPM.
- As supporting work, implemented and submitted upstream the surrounding text support for:
    - ibus-qt4 (*link*)
    - Qt 5 (*link*)
    - GNOME Terminal (and related terminal emulators) (*link*)
    - Ubuntu Unity (*link*)

Hobby kernel

Wrote a simple hobby kernel in C and x86 assembly while in high school. Faced several challenges including memory management, proper CPU mode and context switching, hardware interface. Led to valuable understanding of an OS.

Other

- Extensive localization works for several subprojects inside the Ubuntu project, as well as for several Mozilla projects.
- Run local weekly TDD workshops in Hanoi.
- Help run CodeClub Vietnam, a local organization that aims to develop programming literacy in primary school children using MIT Scratch, a graphical programming language. Maintain infrastructure, deliver classes and educate volunteers.