

Ismael Barros Barros

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EXPERIENCE

Work experience

Lead Software Engineer 2010 – present
i+D3 S.L.

Industrial software design and implementation. Project management.

Collaboration fellowship, 2009

Department of Electronics and Systems, Universidade da Coruña.

Helped with the creation of didactic material and the development of a simple website¹ using PHP and Smarty.

Web development, systems administrator, sales, advertising and public relations, 2008 – present

FreeWear.org.

Developed an e-commerce site² using a *(BSD)AMP* platform with extensive use of JavaScript and AJAX. Helped with the administration of workstations and servers, opened the store to the English-speaking market, and helped with business decisions.

Summer internship as Software Developer, 2008

Google, Inc.

Extension of the implementation of the *DirectPlay* library for the Wine project

Web development, 2007

Freelance.

Developed a simple car-rental website³ for NovaGalicia S.L. using a *LAMP* platform, and implemented several administration automatization features.

FOSS contributions

Wine⁴. Started working on Wine on 2008 sponsored by Google™, in its program *Google Summer of Code™*. My objective⁵ was to implement the *DirectPlay* library with a *TCP/IP Service Provider*, targeting compatibility with commercial games like *GTA2* or *Baldur's Gate*.

I kept working on the project⁶ after my *GSoC*, sorting and extending my patches in my free time.

klik⁷. Started writing a small C++ utility using *inotify* and *pthread*s, and continued extending the functionality of the *klik* client.

aMule. A couple of trivial patches to fix hierarchical handling of windows with *wxWidgets*.

Synaptics. Maintenance of a patch to swap the touchpad axis.

diffutils. Small patch to fix side-by-side display of coloured texts.

Wireshark. Improvements on the packet dissector for the *dplay* protocol.

Gwenview. Port of *okular*'s mouse-wrapping scrolling feature.

¹<http://www.des.udc.es/>

²<http://www.freewear.org/>

³<http://novagaliciasl.com/>

⁵<http://code.google.com/soc/2008/wine/appinfo.html?csaid=984D708DA20ACA94>

⁶http://repo.or.cz/w/wine/gsoc_dplay.git

Personal projects

Games :

- **PongCraft**⁸. Experiment to learn C++ and SDL. Rescued every now and then in order to test technologies like OpenAL, CMake or Git.
- **Battle Dungeons**. A simple experiment of *roguelike* engine. Started in GNU Pascal, was later ported to Free Pascal and finally ported to C/ncurses as a practical exercise to learn ANSI C. Later was used to implement a simple scripting engine and language with Flex and Bison.

Experiments and demos :

- **quaker**⁹. Little experiment with some OpenGL features (framebuffer objects, vertex shaders and fragment shaders en GLSL, Cg and ARB, etc).
- **defcon-plasmoid**¹⁰. SVG processing experiment in a KDE4 plasmoid.
- **xaquim**¹¹. Arduino-based robot programming for a robotics competition.
- **pongclock**¹². Simple OpenGL-based screensaver for Linux.

Web design :

- **id Software: Evolución tecnológica**¹³. Excercise to learn HTML, CSS and PHP, taking the slashdot.org source code and playing with it until turning it into the interface of a research work on the technology developed in id Software in the 1990's. Specially interesting was the subtask of improving a basic raycasting engine written as a Java applet, and turning it into a proof of concept of a web-based *Wolfenstein 3D*¹⁴.

SKILLS

Programming

Advanced level: C, C++, Python, Java, shell scripting

Intermediate level: Ocaml, Matlab, PHP, JavaScript, HTML, CSS, SQL, L^AT_EX, SDL, OpenGL, ncurses, pthreads, PVM, MPI, LEX, YACC, MySQL

Basic knowledge: Perl, Pascal, Haskell, LISP, COBOL, FORTRAN, GLSL, Cg, OpenAL, GTK, Qt, OpenMP, Android, CUDA

Related utilities: Git, SVN, CVS, autotools, Make, CMake, Emacs, Vim, GDB, Valgrind, etc.

System administration

Admin level: Linux, IOS, PIX

User level: Linux, [Free,Net,Open]BSD, MS-Windows, MS-DOS

Misc

2D design: GIMP, Photoshop, hugin, Inkscape

3D design: Maya, 3D Studio Max

Video editing: Cinelerra

Audio editing: Audacity

⁸http://github.com/RazZziel/sc_pong

⁹<http://github.com/RazZziel/quaker>

¹⁰<http://github.com/RazZziel/defcon-plasmoid>

¹¹http://github.com/RazZziel/xaquim_project

¹²<http://github.com/RazZziel/pongclock>

¹³<http://sabria.tic.udc.es/gc/Contenidos%20adicionales/trabajos/Juegos/IdSoft/>

¹⁴<http://sabria.tic.udc.es/gc/Contenidos%20adicionales/trabajos/Juegos/IdSoft/?page=22>

EDUCATION

Studies

M.D. in Computer Engineering. (2004 – 2014) Universidade da Coruña

Erasmus exchange programme. (2007 – 2008) Turku University of Applied Sciences

High School Diploma, Science program. (2002 – 2004) I.E.S. Beade. Graduated with honors.

Courses and certifications

Network Security. (Cisco Systems, 2008) 2 courses (*Network Security 1, Network Security 2*)

CCNA. (Cisco Systems, 2008) 4 courses (*Network Fundamentals, Routing Protocols and Concepts, LAN Switching and Wireless, Accessing the WAN*)

IT Essentials. (Cisco Systems, 2008) 2 courses (*PC Hardware and Software, Network Operating Systems*)

Introduction to GIS. (UDC - AFI, 2009)

PERSONAL

Languages

Native level: Spanish, Galician

Advanced level: English

Basic concepts: French, Chinese

REFERENCES

References are available upon request.