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Javier Martínez Canillas

Summary

I'm an open-source enthusiast software engineer with experience working on different layers of the software stack.

Interests

Software engineering, Linux user-space and kernel development, device drivers, Linux systems administration.

Education

2010 - 2011

Master of Science (M.Sc.), High Performance Computing - Universitat Autònoma de Barcelona, Bellaterra, Spain.

Thesis: *Including the Workload Effect in the Parallel Program Signature.*

Advisor: Prof. Emilio Luque.

2002 - 2008

Bachelor of Science (B.Sc.), Informatics Engineering - Catholic University "Nuestra Señora de la Asunción", Asunción, Paraguay.

Thesis: *A new approach to solve Multi-Objective Evolutionary Optimization Problems using Linear Genetic Programming.*

Advisor: Prof. Benjamín Barán.

Awards and Honors

PIF-UAB predoctoral scholarship for Master of Science studies at Universitat Autònoma de Barcelona.

Professional Experience

January 2012 - Present

Software Engineer - Collabora (<http://www.collabora.co.uk>): Open source consulting firm.

Working on improving the Desktop Bus (D-Bus) inter-process communication system.

Development of a new socket address family for the Linux platform.

Platform: Linux.

Technologies: C, Kernel Build System (Kbuild), Git.

Repository: <http://cgit.collabora.com/git/user/javier>

September 2011 - January 2012

Linux Kernel Engineer - ISEE (<http://www.isee.biz>): Embedded systems manufacturer.

Linux Kernel and bootloader (X-loader and U-boot) porting, customization and device drivers development for custom ARM OMAP3 (Cortex-A8) System-on-Chip boards.

Platform: Linux on ARM TI OMAP3 (Cortex-A8).

Technologies: C, Kernel Build System (Kbuild), Git.

Repository: <http://git.igep.es/>

October 2010 - August 2011

M.Sc. Student, Professor and Researcher - Computer Architecture and Operating System department, Universitat Autònoma de Barcelona.

Design and implementation of a parallel application performance analysis and prediction tool.

Doing research to improve the tool accuracy.

Teaching assistant for the course “Electronic systems design based on microcontrollers”.

Platform: Linux clusters

Technologies: C/C++, MPI, GNU Build System (Autotools), GTK.

November 2009 - September 2010

Software Engineer - TDI S.A. (<http://tdi.com.py>): Software factory.

Designed and developed an enterprise resource planning for a distribution company and a portal solution for a non-governmental organization.

Platform: Java Enterprise Edition 6 and Liferay.

Technologies: Java Enterprise Edition development consulting: Glassfish, Java Server Faces 2.0, Enterprise Java Beans 3.1, Java Persistence API 2.0, JAX-WS, JAX-RS, Facelets, JasperReports, Jboss, Liferay, Jboss Seam, Facelets.

July 2009 - September 2010

Professor and Researcher - Computer Engineering, Polytechnic Faculty, National University of Asunción.

- Updated the Linux Device Drivers 3 book examples to compile and run with newer kernels. So students can develop their own virtual device drivers based in those examples:

Repository: <https://github.com/martinezjavier/ldd3>

- Developed a sniffer as a kernel module using the kernel's protocol handler (*struct packet_type*) kernel infrastructure to help students understand packet reception.
- Developed a firewall as a kernel module using netfilter register hooks API (*struct nf_hook_ops*) to help students understand data structures used by the kernel to store frames (*struct sk_buff*) and headers (*struct iphdr*, *struct tcphdr*, *struct ethhdr*).

December 2008 - October 2009

Software Engineer - Tabacos del Paraguay S.A. (<http://www.tabacosdelparaguay.com>): Cigarettes distribution company.

Designed and built a data warehouse and geographic information system.

Platform: Microsoft business intelligence and Pentaho.

Technologies: Pentaho Data Integration (Kettle), Pentaho Analysis (Mon-drian), Pentaho Reporting, Pentaho BI Server, MS Integration Services, MS Analysis Services, MapServer, GeoServer, Postgresql, Postgis, MySQL Spatial Extensions, OpenLayers, Mapfish, Google Maps API.

May 2008 - November 2008

Software Engineer - Telecom Personal Paraguay (<http://www.personal.com.py>): Cell phone and internet service provider.

Designed and developed an enterprise mobile application suite and location based services.

Platform: Microsoft .Net and Gemalto.

Technologies: j2me, Gemalto SAT, C#, ASP .Net, jQuery, Windows Services, MS SQL Server, Google Maps API, jQuery.

March 2005 - May 2008

Developer and System Administrator - Simeic (<http://www.simeic.com>): Consulting company.

Enterprise resource planning software development and Linux system administration.

Platform: Linux and Mono.

Technologies: C#, GTK, PHP, Mysql, Apache, Bind, Samba, Postfix, Squid, Jabber, Iptables/Netfilter.

Technical skills

- Languages: C, Bash, Python, Java, C#, Javascript, PHP, SQL.
- Frameworks: GTK, GNU toolchain, Kernel Build System (Kbuild).
- Operating Systems: Linux (kernel development, porting and device drivers).

Open source contributions

May 2010 - Present

Kernel hacker - Linux kernel (<http://git.kernel.org>)

Kernel janitor with contributions to ARM architecture, usb, network, media and input subsystems.

Upstream maintainer of the Cypress TrueTouch Gen3 touchscreen driver.

<http://www.ohloh.net/accounts/martinezjavier>

Publications in Refereed Conferences

- [1] R. Sánchez, J. Martinez, B. Barán. *Macro-Economic Time-Series Forecasting Using Linear Genetic Programming*, 11th Joint Conference on Information Sciences, Dec 15-20, 2008, China.
- [2] Javier Martinez Canillas, Roberto Sánchez, Benjamín Barán. *Estimation Models Generation using Linear Genetic Programming*. CLEI Electronic Journal Volume 12 Number 3, December 2009. Regular Issue and Special Issue of Best Papers presented at CLEI 2008, Santa Fe, Argentina.
- [3] Martinez Canillas, J. and Wong, A. and Rexachs, D. and Luque, E. *Predicting Parallel Applications Performance using Signatures: the Workload Effect*. Computer Systems and Applications (AICCSA), 2011 IEEE/ACS International Conference on. December, 2011, Sharm El-Sheikh, Egypt.
- [4] Martinez Canillas, J. and Wong, A. and Rexachs, D. and Luque, E. *Including the Workload Effect in the Parallel Program Signature*. High Performance Computing and Communications (HPCC), 2011 IEEE International Conference on. September, 2011, Banff, Canada.