Víctor Muñoz

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Areas of specialization

Software development, computer architecture, microelectronic circuits design and verification, signal processing methods and algorithms, network analysis and design.

Experience

2012–present Freelance worker.

- Design and development of a web–scale media sharing web service.
  Technologies: Python, Django, MongoDB.

2011–2013 LEAD DEVELOPER, ITEISA Desarrollo y Sistemas, S.L., Santander, Spain.

- Streamlining of the company software development process, migrating to a version control system and an automated configuration and deployment system.
  Technologies: Git, Puppet.

- Design and development of a search engine on top of the whole body of parliamentary acts of the Spanish Congress.
  Technologies: Apache Solr, Kyoto Cabinet, OpenNLP, OpenCalais, Perl.

- Design an development of a window configuration system, to be integrated into a window manufacturer website.
  Technologies: JavaScript, Processing.js, jQuery, CakePHP, MySQL.

- Design, development and deployment of a real–time rendering system for a shoe-customization web application.
  Technologies: CakePHP, Imagick, MySQL, FastCGI, POV-Ray, Autodesk Maya, ZeroMQ.

- Design and development of a scraper to extract the gas price for all gas stations in Spain from the official database; development of a user–friendly web and mobile app with the resulting data.
  Technologies: Python, Requests, SQLAlchemy, MySQL, CakePHP, HTML5, jQuery Mobile, PhoneGap.

2011 HW/SW ENGINEER, TEDESYS Global, S.L., Santander, Spain.

- Design and implementation of a stereo vision system; adapting current OpenCV algorithms for implementation in a FPGA system.
  Technologies: C/C++, VHDL, OpenCV, dc1394, Boost.

2008,2009 Summer grant, Magnetoplasmonics group, Madrid Microelectronics Institute (IMM – CSIC), Madrid, Spain.

- Debugging, improving and extending a scattering–matrix based numerical code, to be executed in a multi–processor system.
  Technologies: C/C++, BLAS, Lapack.

Education

2005–2010   MSc in Telecommunications Engineering, Universidad de Cantabria; speciality on microelectronics.

Microelectronics specialization

Design and verification of digital integrated circuits.
Design of full–custom analog integrated circuits.
Embedded systems design, especially systems on chip (SoC). Development of task–specific hardware accelerators in VHDL.

Specific education

2013   *M101P MongoDB for Developers*, online course organized by 10gen Education.
2011   *CAP Theorem, PACELC and Determinism*, webinar organized by VoltDB.
2011   *Big Data Onine Summit*, webinar organized by VoltDB.
2010   *OpenCL Programming Webinar Series*, online course organized by AMD.

Languages

Spanish, native speaker.
English, fluent. Technical assessment in juridic and technical translations.

IT Skills

Programming languages

Proficiency in C/C++, Python and PHP.
Good knowledge of JavaScript, Ada, VisualLISP, MIPS assembler and UNIX shell scripting.
Working knowledge of Perl, Ruby and Java.

Operating system administration

Windows, Linux (SuSE, Debian, Ubuntu, Fedora, RedHat/CentOS), *BSD (OpenBSD, FreeBSD).

Web development

Frontend: HTML5 & CSS3, JavaScript, jQuery & jQuery Mobile, PhoneGap, Processing.js, Raphaël.
Backend: MVC frameworks based on PHP (CakePHP) and Python (Django, Flask, Grok, Tornado).

Database management systems

Relational databases: MySQL, PostgreSQL.
NoSQL databases: MongoDB, Redis, Kyoto Cabinet.
Search engines: Apache Solr.

Version control systems

Centralized: Subversion.
Distributed: Mercurial, Git.